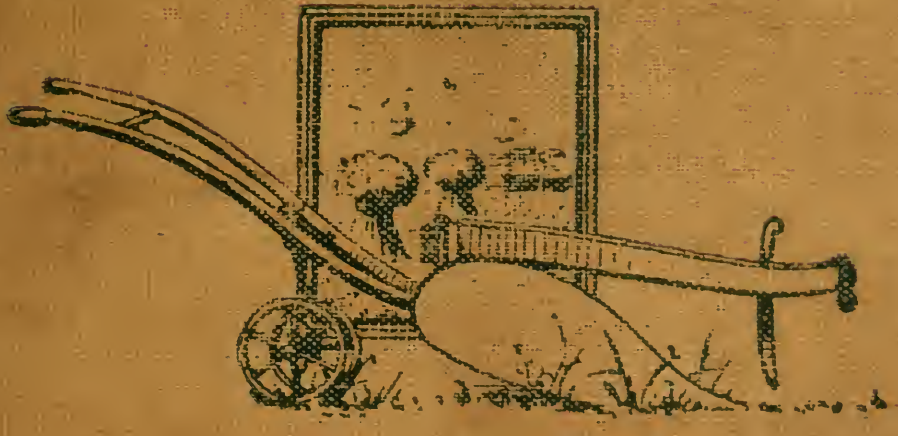
THROUGH CANADA IN HARVEST TIME



JAMES LUMSDEN

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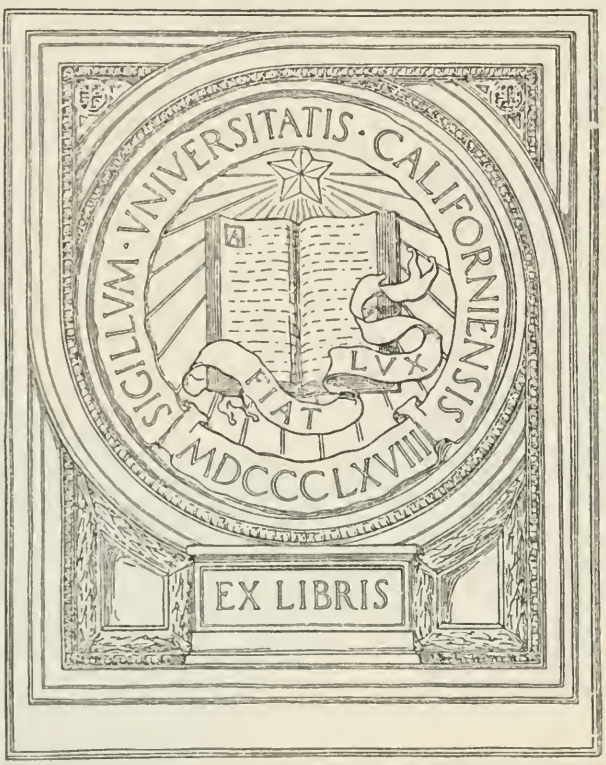

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THROUGH CANADA IN HARVEST TIME. With Map and Illustrations. By James Lumsden. London: T. Fisher Unwin.

Mr Lumsden was one of a small party of British journalists who visited Canada in the summer of 1902, on the invitation of the Dominion Government, to see with their own eyes the great progress which has been made in recent years in the development of the agricultural and mineral resources of the country and the vast possibilities that are opened out to the enterprising colonist. Much of this "study of life and labour in the Golden West" has already appeared in the journals for which the writer was commissioned, but the style and the accomplishment are something above the expanded newspaper article, and, despite the statistics and economic data, the book is most attractive, and is the more welcome as a contribution to the subject of Canada's capacity as a grain-producing country. Naturally, then, one turns to the chapters on Manitoba and the extensive "black lands" of the western provinces, and all that the author states in the glowing language bred of the infectious optimism of the Dominion is supported by the impressive figures quoted from reliable authority. The settled land is a mere fraction of the entire cultivable area, and it is computed that in ten years' time, even at the present rate of increase, the grain production of Manitoba and the western territories would amount to the colossal aggregate of 600,000,000 bushels, of which, according to Mr M'Kellar, the Deputy Minister of Agriculture for Manitoba, 400,000,000 bushels would be available for export. The area cropped in Manitoba in 1902 was 3,141,135 acres, and there are in all 25,000,000 acres capable of cultivation. The fertility of the soil is practically inexhaustible, and by the adoption of the "summer-fallowing" system paying crops can be raised year after year without the application of manure. It is a noteworthy point that in the large "stores" which supply these districts, though the bulk of the goods is of Ontario or United States manufacture, "there is a disposition to favour the English article as against the produce of the United States." Mr Lumsden also deals, more or less in detail, with cattle-ranching in Alberta, the lumber trade, fisheries and mining of British Columbia, the nickel mines of Ontario, and the iron industries of Sault Ste. Marie. Everywhere there is evidence of Canadian industry and American enterprise, and, too frequently, of British indifference. There are many fine photographic illustrations, and the whole work bears out the author's contention that Canada "offers to all who are not impatient of toil better opportunities of attaining comfort, independence, and fulness of life, than are to be found in any of the Old World States."

NADA

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London: T. Fisher Unwin.

THROUGH CANADA IN HARVEST TIME.

Through Canada in Harvest Time. By James Lumsden. (T. Fisher Unwin. 6s.)—Mr. Lumsden travelled through Canada in 1902 as a member of a party of journalists. It is not, perhaps, the surest way of seeing and understanding a country, but it is probably the pleasantest. Nevertheless, Mr. Lumsden is a capable critic, and he notes with some amusement the redundant enthusiasm of the Canadian for his country and convincing belief in its destiny. He is enthusiastic himself, being especially struck by the wheat of Manitoba, and the ease with which a mere scratching of the soil produces crops continuously from the same ground. This successive cropping is overdone. The Sacramento Valley is a case in point. In fact, the charge of greed could be brought against all classes of pioneers,—they are thoroughly reckless, and almost criminally wasteful. The energy, the hope, and the sanguine cheerfulness of the settlers, from Quebec to Vancouver, infected Mr. Lumsden; and certainly the rapid success that waits on the worker must appeal to those who have seen the small results of a life of strenuous endeavour in England in the farming class. Mr. Lumsden notices the extraordinary change that takes place in the uneducated labourer in Canada; he becomes a self-respecting person, and really more of a man. He might have emphasised this feature of Colonial progress, for it is a very striking one. Men are made to think for themselves, to realise the value of a personal initiative. Mr. Lumsden speaks of one drawback to the career of the successful settler. His tendency to overvalue the material aspect of life is apparent to all. As a friendly critic, Mr. Lumsden notes the settler's disregard of appearances, his uncared-for harness, his untidy agriculture—all is accounted for by disinclination to waste time on unprofitable things—but he deprecates the lack of refinement so often displayed by the settler's house, and proceeding from the same origin. The dollar occupies his thoughts too largely. But the prevailing note of this harvest tour is praise and hopefulness, for the traveller sees a splendid future before the country, and as an Imperial granary that future is already assured.

HARVEST FIELD IN MANITOBA.

THROUGH CANADA IN HARVEST TIME

A STUDY OF LIFE AND LABOUR IN THE GOLDEN WEST

BY

JAMES LUMSDEN

WITH MAP AND ILLUSTRATIONS

LONDON: T. FISHER UNWIN
PATERNOSTER SQUARE · 1903

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Dedication.

The author dedicates this book to the workers of England, Scotland, and Ireland, hoping that it may inspire many to seek new homes in a land which, though it may not "flow with milk and honey," assuredly offers to all who are not impatient of toil better opportunities of attaining comfort, independence, and fulness of life, than are to be found in any of the Old World states.

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PREFACE

THE literature devoted to Greater Britain in circulation in this country is not so voluminous as to render necessary any apology for increasing it by another volume. A visit to a public library will convince any one desiring information about the Colonies that the number of popular works on the subject is surprisingly small, and hardly commensurate with the importance of the Colonies themselves, or the interest taken in their history, their progress, and their latent resources. With regard to Canada in particular, the expansion of recent years has been so great and rapid that quite a new order of things has come into existence since the opening up of the Great West by the Canadian Pacific Railway. The majority of those who within the past eighteen years—since transcontinental transport was made possible—have settled in Manitoba, Alberta, and British Columbia, have been workers and pioneers who have had little leisure to record their achievements in harnessing the prairie, clearing the forest, and opening the mine. The conversion of the "Great Lone Land" into settled and prosperous provinces was at first so

slow that there was little to record, and latterly has been so fast that a phenomenon so momentous in the up-building of the British Empire has attracted far less attention than it deserves. The principal aim of this work is to render an account of the present state of the Canadian West, to describe its agricultural and mineral resources, and to explain the far-reaching consequences to the Dominion of Canada (and to the people of the United Kingdom) of the transformation of the prairie-lands into grain-growing provinces. Incidentally the attractions which Canada holds out to emigrants from the British Isles are dealt with.

During the harvest of 1902 the author travelled through Canada as one of a small journalistic party who by public bodies and private individuals were given such opportunities of spying the land as according to general testimony had never before been accorded to any body of inquirers from the Old Country. The text may be roughly described as a combination of two elements—the writer's own impressions, and matters of fact of a statistical nature supplied by the official departments of the various provinces. The former is the preponderating element, and for it the author takes the entire responsibility. Opinions formed by the party of visitors as a whole are described as such in the text.

The author has a large debt of gratitude to discharge—to public men in every part of Canada who placed their time and their knowledge at the disposal of his colleagues and himself. The names of all these gentlemen it would be impossible to enumerate, but the services of some who took special pains

to make the tour a pleasure and a success are of necessity acknowledged in the course of the narrative. Portions of this book have appeared in a series of articles in the *Leeds and Yorkshire Mercury* and in the *Leeds Mercury Weekly Supplement*, as a special commissioner for which the author went out to Canada. This work, however, is not a mere reprint of the articles referred to; it aims at being an organic whole, and has been for the most part specially written with a view to production in its present form.

Among those to whom the author desires to acknowledge assistance are Mr. W. T. R. Preston, the Dominion Commissioner of Emigration for Europe, who accompanied the party in Canada and took several of the photographs used for purposes of illustration. Mr. Preston also undertook the tedious task of revising all the proof-sheets. For many beautiful illustrations of scenes in British Columbia the writer is indebted to Mr. W. H. Ellis and the officials of the Bureau of Provincial Information at Victoria. The Canadian Pacific Railway Company's splendid series of photographs was also freely placed at the author's disposal by Mr. Charles Drinkwater, Montreal, Secretary to the Company.

September, 1903.

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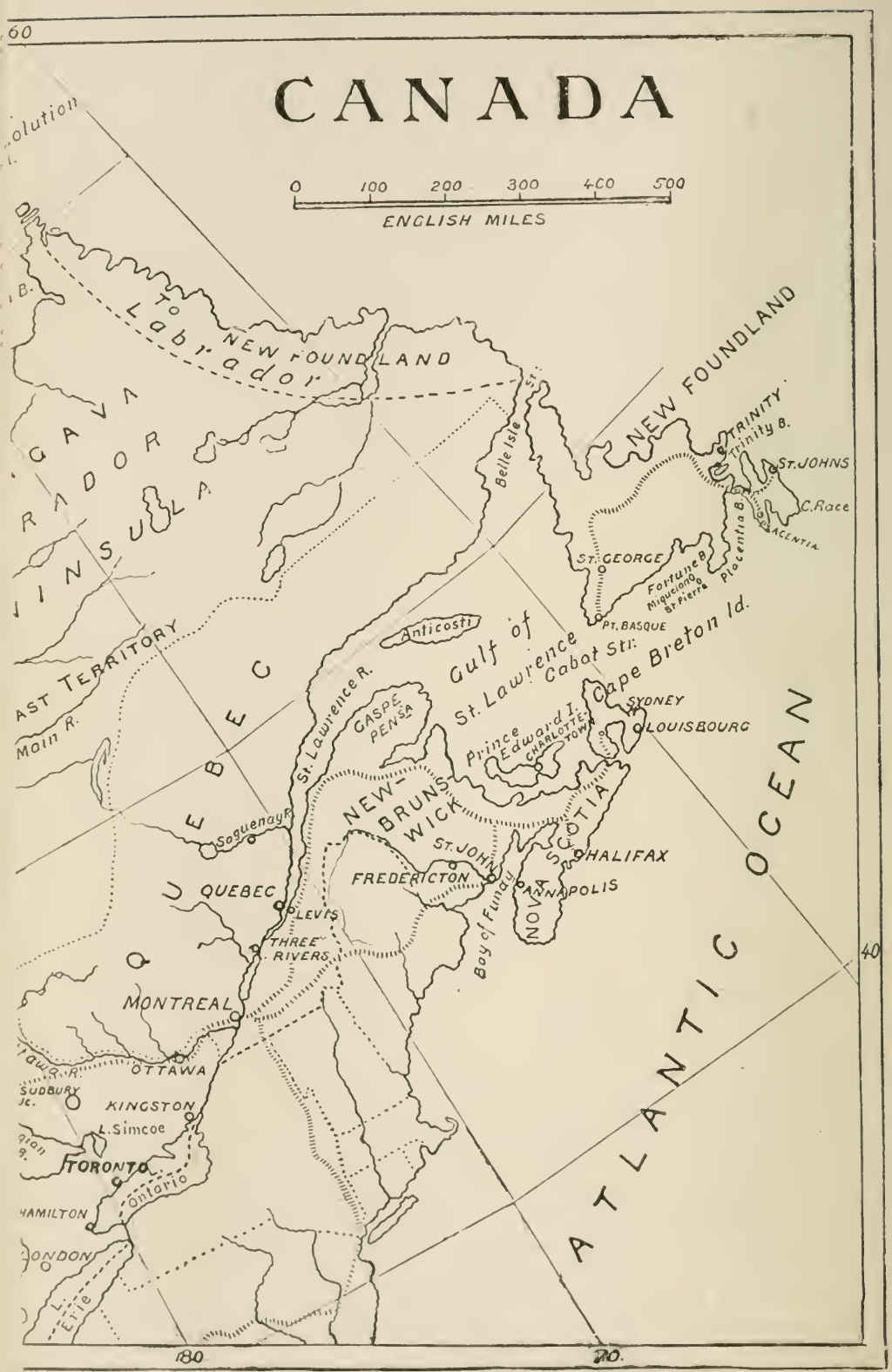


LONDON: T. FISHER UNWIN, PATERNOSTER SQUARE, E.C.

THROUGH CANADA IN HARVEST TIME

CHAPTER I

THE EMIGRANT OCEAN-LINER

THE emigrant ship, like the sailing clipper, has disappeared from the ocean. Colonists now cross the seas with every passenger steamship that leaves these shores. Emigration, in so far as regards the classes who emigrate from the British Islands, has likewise undergone great change. Three-quarters of a century ago—or even less—not only families, but whole village communities and Highland clans, it might be the entire population of a glen, were shipped, in some cases forcibly deported, to the bleak shores of Newfoundland, or, if fate and the winds were more propitious, to the more genial clime of Nova Scotia. The emigration of fishermen and tillers of the soil to these ancient colonies, the nucleus of that colonial empire in North America which now embraces some of the sunniest lands on the globe, has long ceased; the tide of emigration has rolled thousands of miles further westward, and while its waves now beat

against the Foot-hills of the Rocky Mountains, or spread down the British Columbian valleys to the Pacific shore, the sources whence the current has been replenished have been pushed eastward to the slopes of the Ural Mountains.

So far as the perennial stream of emigration from Europe to Canada is concerned the Saxon and the Gael have in recent years given place to the Swede, the Finn, the Lett, and the Slav. England, Scotland, and Ireland have given much of their best blood to populate the American Republic. The English rural districts and the Scottish Highlands, almost denuded of their yeomen and cottars, cannot now, as formerly, swell the emigrant ranks, and the less hardy inhabitants of our huge industrial towns in too many cases lack the spirit to cross the seas to better their fortune. But in northern Europe peasant populations of undegenerate physique still possess the spirit to flee from poverty and oppression, religious and governmental. The misgoverned Finns, Lithuanians, and Galicians have heard of the Golden West of Canada; they know that free homes await millions in that boundless domain, and every summer thousands of young men and young women, and hundreds of peasant families, join the westward trek, transferring to the New World the nerve and muscle which the unenlightened selfishness of the Old World condemns to barren toil.

Every ocean-liner which crosses the Atlantic from the middle of March to the end of October carries its contingent of emigrants for the Canadian West. In the early months of summer every berth in the vessels of the Canadian lines is crowded, and

although the tide has passed the flood, there is still during August little spare accommodation in the steerage. It was my fortune to mingle with the emigrant crowd on board the Allan Liner *Tunisian* in her outward-bound passage in the beginning of August, 1902. The gallant ship left the Liverpool River in a yellow fog, but when lying in Lough Foyle on the following morning awaiting the English mails one had an opportunity of studying the characteristics of the teeming human freight the vessel had on board. Of fourteen hundred passengers rather more than half were in the steerage, and the majority of the latter were emigrants from Continental Europe. The brilliant sunshine and the dancing waters of the lough brought all on deck, a picturesque and variegated crowd. Scores of children played at hide-and-seek around the hatchways, mites of womankind with long plaited flaxen and yellow hair, mannikins with top-boots like Baltic seamen, and others with the short breeches and truncated parti-coloured hose of the Bavarian Swiss. Among the men were stolid moujiks with leathern coats, fur caps, red shirts, and long-legged boots of undressed leather; giant Finns and Swedes, blue-eyed and intensely freckled; dapper Belgians and Frenchmen with baggy trousers, striped white and blue. All ages were represented, old men and old women, and infants at the breast. Not a few pale mothers might be seen nursing babies that had hardly beheld the light in the lands of their nativity. Shallow and conventional would be the heart that remained unmoved on board an emigrant ship, and hard the eye that was never moistened with a tear. There you beheld

the "pathos and the sublime of human life"; the woe and the suffering of direst poverty, the hope and the faith that embolden the oppressed. You see many a young mother, naturally a comely specimen of the blond Northern race, with drawn and pinched features, and a hungry, woeful expression that takes the lustre from the eye and loveliness from the cheek. But it is the capacity to endure that makes these peasants, men and women, successful colonists. When you think of the misery they are leaving behind; of the abundance, the liberty, and the enlightenment of the land they are going to, and remember that that land is one of the lands under the Red Ensign, your heart beats stronger, and even before you have crossed the ocean you fall under the spell of the Golden West. It is not alone the aspect of poverty and distress that brings the lump to the throat; it is the consciousness of a new hope, the assurance of a brighter life, and the realisation that among scenes like these the spectator is in the heart of a mighty impulse in the forward march of humanity.

The Northern Summer Route.

The up-to-date Atlantic-liner is a vessel of great breadth of beam, and the summer passage is seldom attended by much discomfort, save that inevitably entailed in the steerage among crowds of womenfolk huddled together in an environment uncongenial to female tastes at the very best. All the way across we had a dead smooth passage, and the emigrants could while away the time by music, singing, and even dancing, on deck. By the

summer route to the St. Lawrence, the Great Northern Circle Track, less than five days are spent on the open ocean, and if all has gone well the emigrant generally obtains his first glimpse of Canadian soil on the morning of the sixth. To the wayfarer who has travelled thousands of miles to seek warm skies and pleasant places that first glimpse is certainly far from inspiriting. As the liner approaches the Straits of Belle Isle, which separate the icy desert of Labrador from Newfoundland, the voyager gazes upon the barrier of archean rocks which from within the Arctic Circle to Cape Race, a distance of 3,000 miles, form the north-eastern bulwark of the New World continent to the Atlantic Ocean. A more forbidding and inhospitable coast than that of Labrador could not be conceived. Not a handful of soil can be seen upon the severely glaciated rocks; not a trace of vegetation save here and there daubs of drab-coloured lichen and rarer yellowish-green stains of moss. "Do any human beings live there?" is the question which rises to every one's lips. "What like can it be in winter!" "Does anything grow inland?" In vain the passengers direct their binoculars upon these naked reefs of leaden and livid hue to detect signs of the presence of man. Here the rocks are planed by ice to the water's edge; there they rise in sheer escarpments, the contour so bold and angular as to be suggestive of geological diagrams rather than the rugged and picturesque works of nature.

When the ship comes under the crags of Belle Isle the signal station is distinctly seen. The spectacle of this lonely outpost of civilization in

the midst of so vast a waste of waters and sterile rocks heightens the impression of solitude and desolation which the bleak shores inspire. Belle Isle Strait is a clear channel, about ten miles broad at its narrowest point, presenting no obstacle to navigation if ice and fog are absent. We sailed up the straits amidst brilliant sunshine; the pale cobalt of the northern seas glistened in the sun, but the features along shore were indistinguishable in the blinding reflection of the solar radiance. The transition from the pallor of the sullen surge and sky of the Atlantic was extremely exhilarating, and the saloon passengers' only regret—certainly not shared by the ship's officers—was that the strait was clear of ice.

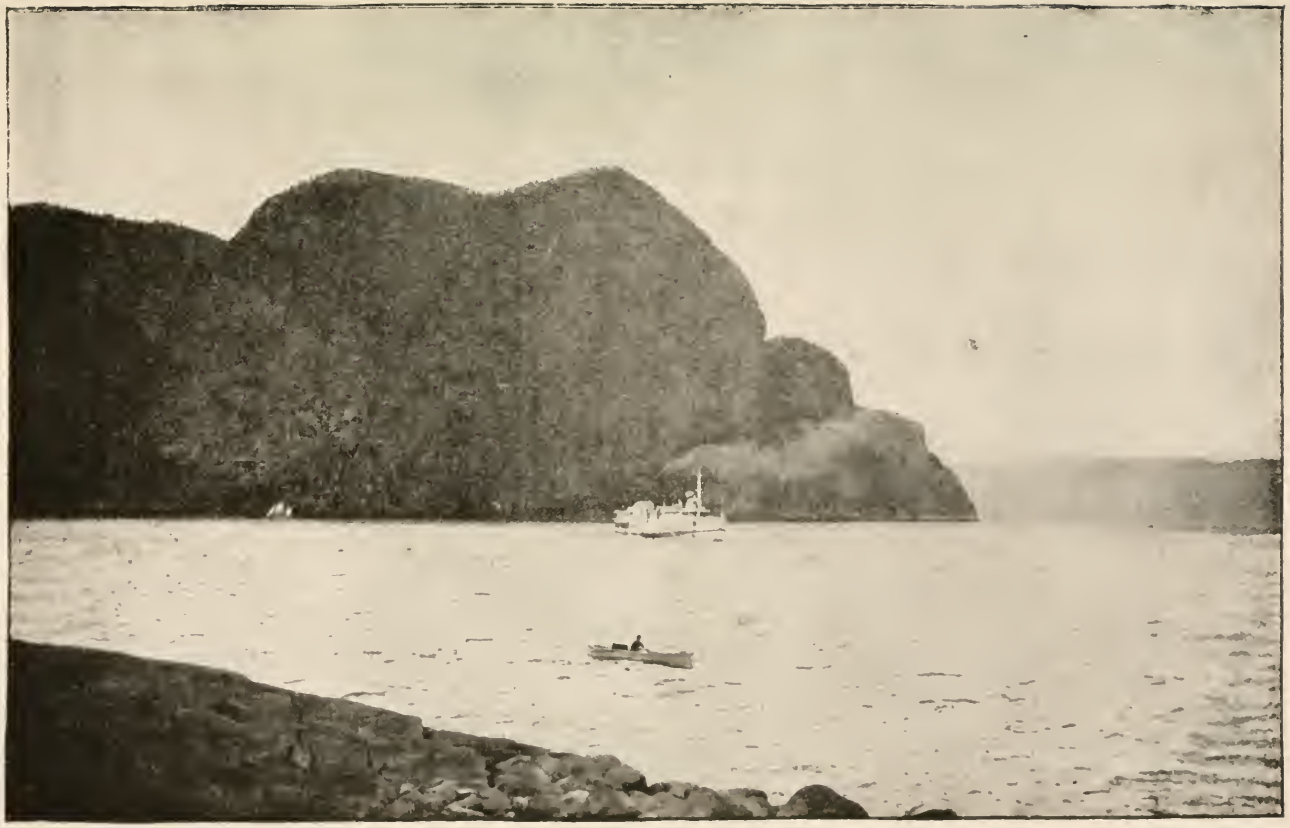
When the Straits of Belle Isle have been passed, when the mountains of Labrador and the low shores of northern Newfoundland have faded from view, a whole day is spent upon the Gulf of St. Lawrence out of sight of land. I had expected that in the straits and in the gulf we would encounter fishing fleets and pass scores of sailing craft, but the only signs of maritime life in the straits seen by us were a few whitewashed fishermen's bothies on the northern shore and two solitary schooners. The solitude of these waters is all the more remarkable when we reflect that the northern passage by the Straits of Belle Isle is by far the shortest route between Europe and North America. This was the route adopted in summer by the old sailing ships engaged in the timber trade between England and Quebec. It is the route which during six months of the year will become the highway of ocean travel between Europe and America as soon

as a fast Canadian mail service is established. Such is the saving of distance that, even including the delay of several hours in waiting for the London mails at Moville, fifteen-knot steamers at present perform the voyage from Liverpool to Quebec in eight days, and a twenty-knot steamer could accomplish the run in six. It is not only for Canada, but for the whole of the Central and Western States of the Union, that this is the shortest route in summer. Once steamers of great speed are put upon the Northern Circle Track, travellers for Chicago will be able to reach their destination a whole day sooner than by the present route to New York.

Sailing Up the St. Lawrence.

The course through the Gulf of St. Lawrence lies in a south-south-westerly direction, until we round the eastern end of Anticosti, when the ship is put upon an almost due westerly tack for the coast of Gaspe, the Accadia of American song. When the blue hills of Gaspe rise over the port bow, the patriotism of the Canadians rises high, and the admiring gaze is never diverted from the endless panorama of dusky mountains decked with dark spruce and pine almost to the sky-line. For a whole afternoon the course lies along the coasts of Gaspe and Matane, close in shore under the shadow of beetling cliffs and lofty purple mountains. For nearly two hundred miles the glittering waters of the broad estuary flow under dark ramparts of slate-coloured metamorphic rock and ferruginous sandstone. For immense distances the solid framework of the continent has been carved by floating ice into

a succession of perpendicular parapets, rising sheer from the river channel sometimes to a height exceeding one thousand feet. A great area of the land mass has been shorn away, and the flat-roofed mountains, which bound the horizon, have been sculptured by ice out of the lofty tableland of indurated and metamorphosed Laurentian strata. A few dome-shaped mountains lift their summits among the clouds clear of the glaciated tablelands; but the continental ice-mantle has planed down the tilted strata over the greater part of the area into far-extended level sky-lines, interrupted at long intervals by notch-shaped valleys hewn out by glaciers. From the St. Lawrence this theatre of ancient glaciation presents an aspect of grandeur and sublimity. Stern, lowering and primeval, there is not a trace of subdued picturesqueness; the rocky fabric of the continent is exposed not in beauty, but in awe-inspiring majesty, but remote from the naked facies of erosion, far in the hinterland, lie smiling valleys of softer loveliness. The lower St. Lawrence is totally unlike most of the famous rivers of the Old World. At its mouth there is no rich alluvial plain or branching delta. All the loess has been swept away by ice, and the channel has been scooped out of that hard metamorphic formation which from the remotest geological epochs, coeval with the dawn of life, has constituted the framework of the North-Eastern Continent of America. Gazing on these stern shores and at the little settlements which erelong diversify the scenery at the mouth of every tributary stream, one marvels at the hardihood of the Brittany fishers who in the seventeenth century founded these lonely hamlets, the first abodes of the



VIEW OF CAPE TRINITY ON THE LAURENTIAN RANGE.

white man in a boundless waste, the most fertile provinces of which still await his advent.

The steamer ascends far up the St. Lawrence before the banks come into view on both shores. For a whole day we had the counties of Gaspe, Matane, and Rimouski on the port side, where all the passengers congregated on deck, entranced with the slowly unfolding panorama, mountain and forest passing by imperceptible transition into receding uplands and pastoral lowlands. Solitary fisher huts and hamlets give place to more pretentious villages, and at last large churches and houses embowered among trees denote a more mellowed stage of civilization. Nothing could exceed the pleasure of sailing up the St. Lawrence. Now at last we may bask in the sun. Before the breeze that whips up the green water into dancing white-caps, trim luggers of exquisitely graceful build, with snowy main-sail and green top-sides, tear along at a spanking speed. The cold gulf and the rock-bound coasts are far astern, and as the sun sinks in flaming splendour we count the hours until at Rimouski, 2,240 miles from Liverpool, we land the mails and come into actual contact with Canadian life.

CHAPTER II

QUEBEC AND ITS ENVIRONS

ON the morning of 15th August the decks of the *Tunisian* were crowded at an unusually early hour. We expected to be in Quebec by noon, and before breakfast the ship had been trimmed for disembarkation. Overnight the scenery along shore had assumed a most inviting aspect. From the Island of Orleans to Matane, a distance of two hundred miles, the channel of the St. Lawrence, even at its narrowest point, is never less than ten miles broad—broader than the Firth of Forth at Edinburgh; but as our course lay well in to the southern shore, in the brilliant sunlight every object could be distinctly seen. Verdant uplands rise by an imperceptible ascent from the river margin, variegated here and there by links and dunes of yellow sand, and as hamlets occur about every five miles, the river margin is literally embroidered with picturesque settlements. When the steamer enters the channel, varying from five to two miles in width, separating the Island of Orleans from Bellechasse County, and known as the Riviere la Fleur, the panorama becomes doubly enchanting, the northern and southern shores vieing with one another in picturesqueness. At Beaulieu, near the western

extremity of the Island of Orleans, elegant chateaus, idyllic retreats, may be seen perched on rocks at the water's edge, and framed in the glistening greenery that festoons the surrounding crags. We are now close to Quebec. Presently over the starboard bow the Falls of Montmorency, a stupendous cascade on the northern shore of the main river, come into view. Seen over the face of the water from a distance of some miles, the falls present the appearance of a colossal crystal of dazzling whiteness, sharply defined against a matrix of dark green, the hue of the pine grove from which the Montmorency River emerges to leap over a precipitous ledge of black rock to a bottomless lynn on a level with the St. Lawrence River. Not without good reason, our Canadian fellow-passengers had been telling us all the morning to be on the outlook for the Montmorency Falls, one of the most remarkable sights all along the river trip.

Quebec comes into view with startling suddenness. The passengers who have been long on the *qui vive* for the far-famed prospect are taken unawares when, emerging from a bend in the river at the western extremity of the Island of Orleans, the steamer glides into an oval-shaped bay, closed in upon the remote western horizon by lofty promontories covered with buildings, many of palatial grandeur, gleaming in the sun. The origin of the name "Quebec"—a subject of endless controversy among Canadian archæologists—has been traced by some authorities to the exclamation "*Quel bec !*" (What a Cape!) attributed to a Norman sailor, one of Jacques Cartier's companions, when he first beheld the rocky promontory on which the fortress stands.

No less suggestive of the scene is the Indian origin ascribed to the name. In the language of the Algonquin or Micmac Indians, it is said, the word signifies a "strait," or narrowing of the river; and at this point for the first time, as one ascends the mighty stream, its channel is narrowed to about a mile in breadth, Cape Diamond on the north and Point Levis on the south confining its waters and standing sentinel over the approach. The buildings upon either shore vie with one another in size and architectural magnificence, but on nearer approach the heights of Levis become dwarfed beside the battlemented front of Quebec, and the commanding situation of the buildings of the capital confers upon them an imposing effect which one might traverse the globe and not see surpassed. The Houses of Parliament, Laval University, the Chateau Frontenac, and the spires of innumerable cathedrals combine to form a picture of rare architectural splendour. The only objects which mar the harmony of the scene are the huge red grain-elevators on the river front, unsightly structures which link Quebec with the commercial spirit of America.

At this point of my narrative it is necessary to explain that I was one of a small party of British journalists who visited Canada at the invitation of the Dominion Government to obtain ocular demonstration of the great progress that has been made in recent years in the development of the agricultural, mineral, and other resources of the country. We travelled as distinguished persons, and Quebec was the starting-point of a progress which in Canada at least will long be memorable. Awaiting us upon the pier was a deputation from the Association de

Frontenac, from Hébert's Statue at Quebec.

la Presse de la Province de Québec. On behalf of that body M. Louis Julien Demers, M.P., and Major M. Le Vasseur, with other gentlemen, prepared to instruct and entertain our party, bade us welcome on our alighting upon the soil of Canada. We were fortunate in this, that our hosts in Quebec were chiefly French-Canadians, so that we got in touch with the native French population straight away. It was necessary that our stay in Quebec should be brief, for a Continent lay before us, and it was our desire that no time should be lost in reaching the Golden West, where the harvest was just commencing. Every province wished to display its "marvellous resources"; every city to show its industrial importance, its natural advantages for commerce, the splendour of its public buildings, the perfection of its municipal organisation, and the excellence of its educational system.

The citizens of Quebec, who have much to be proud of, and who have to stomach a good deal of unmerited disparagement on the part of the English-speaking provinces, had determined to open the show in grand style. Their only regret was that we would not tarry with them for a fortnight in order that we might explore the province, sail up the deep and gloomy Saguenay, see the abysmal gorge through which that river discharges the waters of Lake St. John, and travel from Chicoutimi to Roberval over the metals of the new Trans-Canada Railway.

French-Canadian Commercial Aspirations.

We took up our quarters at the Chateau Frontenac, and gladly would we have lingered in its princely

apartments to hear our hosts rehearse the legends of old Quebec associated with the site; but our mission was not to study antiquities. The colossal round of sight-seeing which for two months without intermission was to tax our powers of endurance, opened immediately after our arrival with an excursion on the St. Lawrence on board the steamer *Lord Strathcona*. On coming down from the Chateau after lunch we were surprised to find a large company of ladies and gentlemen awaiting our arrival at the Quai. The ladies, all in summer muslins and shielding their complexions from the ardent sun with brilliant sunshades, were seated in groups along the Quai upon chairs brought down from the Chateau. It took some time for us to realise that in a trip to inspect a new graving dock, the grain-handling facilities at the harbour, and the piers of the new bridge over the St. Lawrence, we were to have the pleasure and sweet distraction of such distinguished company. We cruised about down channel and up channel all the afternoon, getting our first ocular demonstration of the gigantic preparations being made all along the St. Lawrence highway for the transportation of the grain harvest of the West, and the bronze and purple of sunset had already suffused the sky and converted the bosom of the river into a mirror of living gold before we turned our prow down stream towards the lights of the queenly city.

The site of the new bridge is six-and-a-half miles up the river from Quebec, at a point where the St. Lawrence is extremely narrow. The channel will be crossed by a suspended span and two cantilever arms, giving an unsupported structure 1,800 feet long between the centre of the main piers. This

will be the longest span in existence, exceeding that of the Forth Bridge by 90 feet. The highest point of the structure will be 330 feet, and there will be a clear headway of 150 feet between the bridge and the water level at the highest state of the tide. The Quebec bridge will not be available for railway traffic alone. There will be two railway tracks in the centre, and an electric track and highway on each side. Although the masonry adjoining either bank is well advanced, it will take years to complete the colossal undertaking.

In the English-speaking provinces the charge is universally levelled against the French-Canadians that they are sleepy and unenterprising, a backward and antique race who lag behind the other nationalities in developing the resources of their country and adopting the enlightened ways of Americans. This was not our experience. We found at Quebec a strange and somewhat incongruous commingling of the progressive and utilitarian spirit of the New World, with a full measure of the Frenchman's love of art—the polish, the culture, and sensuousness inseparable from the French character. In no part of Canada did we see public undertakings of greater importance than in the province and around the city of Quebec; and if the French-Canadians are less grave in their deportment, and less addicted to incessantly talking about material aims than the citizens of the Republic to the south or the somewhat Americanised Canadians of Montreal and Toronto, they yield to no community in Canada in ambition for the greatness of their city, and are equally shrewd in appreciating its opportunities and requirements.

Quebec has three darling ambitions, all of which

may in time be realised. These ambitions are that Quebec should be made the summer terminal port of the fast Atlantic steamship service; that Quebec should be the eastern terminus of a trans-continental railway running directly westwards towards the Pacific Ocean; and that the city should be connected by a railway bridge with the southern shore of the St. Lawrence. The bridge, as indicated above, is now being built, and the first portion of the new Trans-Canada Railway has been opened. At every public function which we attended in Quebec these schemes came up for discussion, but the programme was invariably diversified by music and song.

The evening was devoted to band performances on the Dufferin Terrace. The concert was superb, and all the town turned out to promenade the magnificent esplanade. In the Dufferin Terrace Quebec certainly has the finest promenade in the world, and it is justly the city's pride. The promenade is a planked platform jutting out along the brink of the crags. Two hundred feet beneath is the river and the shipping and the old town, with the Cathedral of Notre-Dame des Victoires. The unrivalled prospect by day has been celebrated by a thousand pens; I must be content to praise the scene by moonlight, when the fine band of the garrison was discoursing national airs, and from sunset to midnight the electric lamps lit up the white dresses of a vast assemblage of handsome and vivacious women that would do credit to any capital in Europe.

How unlike England did it all seem, and how unlike America, or any preconceived notions of a British colony! We might have been in some gay

FRENCH CANADIAN VILLAGE NEAR QUEBEC.

pleasure resort of Continental Europe; but the mighty St. Lawrence, heaving in the starlight far beneath, and reflecting the lights of a squadron of ocean-going steamers, eloquently proclaimed that 'twas Canada, and the scene of peerless grandeur banished every thought of comparison from the mind.

No Englishman who visits Quebec should omit a pilgrimage to the shrine of Ste. Anne de Beaupré, twenty miles down the north bank of the river. No Canadian experience will leave a more pleasant memory, or more forcibly illustrate the fact that Lower Canada is the home of a Latin people, who during nearly three centuries have never swerved one iota from the faith and customs of their ancestors. On the afternoon of the second day of our stay at Quebec we performed the pilgrimage.

Among a hundred outings, by stage and buggy, by sail and steam, by water, forest, and mountain, none was more delightful than the ride by the electric tramway down the St. Lawrence banks to Ste. Anne. All the "habitants" were busy harvesting in their tiny fields. In adjoining patches the peasant family, hardy and sunburnt, brunette in complexion almost without exception, might be seen securing the scanty hay crop or cutting buckwheat or barley. Here you never see a binder with four-horse team, nor wheat-fields covering a whole square mile as in Manitoba and Assiniboia. An acre-patch of rye alternates with a white strip of buckwheat; or a stretch of pasture, overgrown with willows and mottled with lupines and chrysanthemums, alternates with a narrow riband of wheat. The peasants who cultivate these crofts have never abandoned the primitive agricultural methods of their Breton ancestors.

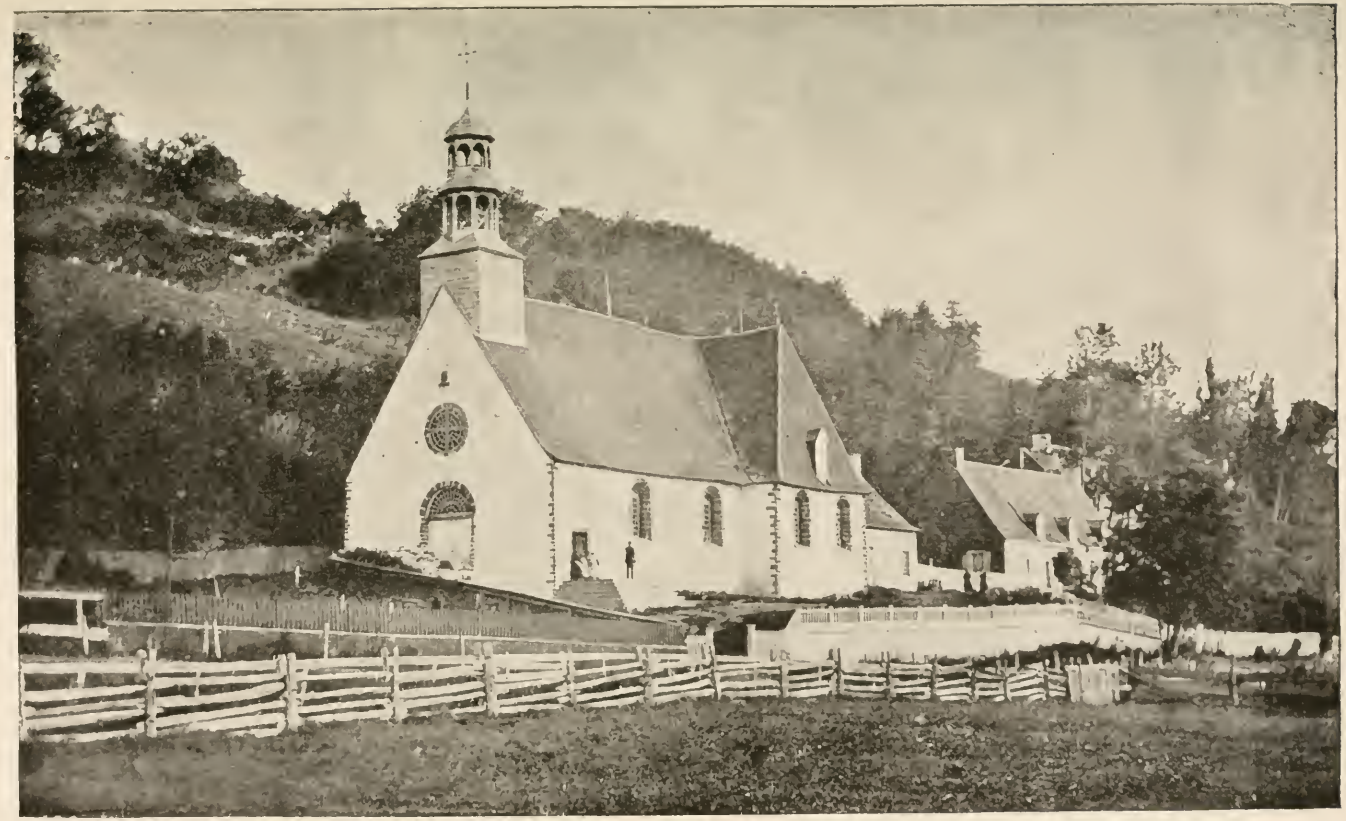
They are what would be called in Cumberland "statesmen." They own their own land—50-acre or 100-acre holdings—are often wealthy, and the farms have remained in the same families since the original French colonisation.

After a glorious hour's ride among fragrant meads, wheatfields, and hayfields, past trim habitant dwellings and hamlets embowered among creeping flowers and fruit trees laden with rosy-cheeked apples and enormous pears, we found ourselves at the Lourdes of Canada.

The shrine of Ste. Anne has been enriched by the donations of the devout, and the decorations, the ornaments, and the paintings are of great celebrity, but to my taste nothing was so beautiful as the profusion of natural flowers that adorned the high altar. These flowers, which are grown in the gardens attached to the residence of the clergy, are magnificent campanulæ, mauve and waxy white, with spikes from six to nine feet long, bearing bells as symmetrical as those of the harebell, but larger than those of any European species. I have seen the gorgeous decorations in some of the most famed cathedrals of Europe, but never anything to compare with the effect of these graceful Canadian flowers. The whole nave is filled with their presence; their beauty imparts a distinctive character, an air of naturalness, to the Basilica of La Bonne Ste. Anne.

Building Trans-Continental Railways.

On returning from Ste. Anne we had a banquet at Kent House, an old summer residence of the



OLD CHURCH OF LA BONNE STE. ANNE.

Governors built on the crest of the cliffs adjacent to the Montmorency Falls. The old chateau, which takes its name from Queen Victoria's father, who for a time in the early days of last century was attached to the garrison, has been converted into a pleasure resort for the citizens of Quebec. Kent House is surrounded by gardens and the groves of the Montmorency valley, and here the stranger generally beholds for the first time elk and kariboo in captivity. At the base of the cliffs are large cotton mills and a water-power station.

Through the open windows of the banqueting chamber the evening breeze wafted the strains of a string band stationed on the balcony, but the tone of the oratory was in marked contrast to the voluptuous character of our surroundings. The chairman, that gallant martialist, Major le Vasseur, set the example of addressing the company in English, with the result that the language difficulty somewhat restrained the exuberance of Gallic eloquence. But some of the speakers were of English race and speech, and one of these was a Mr. Chambers, who, in a luminous, if unnecessarily impassioned speech, expounded to us the importance of the projected Trans-Canada Railway. We found during our subsequent progress that Mr. Chambers's style of oratory is characteristic of Canadians. Their most admired public speakers express themselves upon practical and topical subjects in what, to English ways of thought, appears exaggerated seriousness, nay, solemnity; upon subjects like the building of railways, the settlement of land, and the development of mines they deliver their opinions with rapid enunciation and tumultuous energy, with

flashing eye and quivering lip. In England, unfortunately perhaps, subjects of this nature excite but languid interest, and speeches delivered with fervour and enforced by gesticulation would render the speaker ridiculous. The Montmorency oratory was, however, like the mild and discursive opening lecture in our course of instruction in the ideals and spirit of the New World. It was mere flimsy compared with the stern commercialism of Winnipeg and the West.

Among the illuminati of Quebec we were initiated into most of the ambitions which now engross attention in Canada. We made the discovery that between Quebec and Montreal keen rivalry subsists as to which of these cities shall be selected for the summer terminal port when a fast Atlantic service is established. We were astonished at the fluency with which every one discoursed upon subjects of commercial expansion, which in England none would be supposed to understand except presidents of chambers of commerce, chairmen of dock boards, harbour commissions, and so forth. Public speaking in Canada is essentially utilitarian, and I have heard a dozen speakers get up one after the other each of whom seemed more stuffed with statistics than his predecessor. But in a new country, and such a new country as Canada, commercial expansion is a theme to captivate the imagination, to arouse enthusiasm and vivify the energies of a whole people. The schemes brought before our notice at Montmorency Falls were all of vital moment, not only to the province of Quebec, but to the whole Dominion. Each colossal enterprise involves a corresponding effort, and the results aimed at amply

justify the concern displayed. An epic poet might deem it no unworthy task to sing the opening up of a continent of boundless virgin wealth—the building of its railways, the bridging of its mighty rivers, the launching of fleets on its sea-like lakes, and the peopling of its trackless solitudes with cultivators of the soil and bustling industrial cities. The constructive politics of a new country is far more engrossing than the reform politics of an old.

Canada is a land of vast horizons, visually and mentally. Mr. Chambers's exposition of the Trans-Canada Railway scheme affords an illustration. Canada has the physical basis for a great empire, and her people are straining every nerve to prepare the foundations. The great impetus has come from the influx of settlers into the West. In 1901 a sparse population of 400,000 produced 100,000,000 bushels of grain. During the past two seasons tillers of the soil have been spreading over the grain-growing steppes at the rate of 100,000 per year, and in eight or ten years the production of cereals will be increased to 400,000,000 or 500,000,000 bushels. All this wheat will have to be carried to the seaboard—far and away the largest part of it for shipment to England—and that cannot be done over the lakes and canals when they are frozen up for six months of the year. If the fertile West is to be duly exploited it must be possible to put the wheat on the railway car and run it right through to the ocean port of shipment. Quebec has a port that can float the largest ship that man is ever likely to build, and what we want (I am quoting the speaker) is a continuous line of railway from the West to the great national portal of the Dominion. Such a rail-

way would not only promote the settlement of the West, but increase the wealth and trade of the whole of Canada.

The projected Trans-Canada Railway meets all these requirements. Its charter was obtained from the Dominion Parliament in 1895, and the work of construction has already commenced. The line will run from Quebec and the head of navigation of the River Saguenay to James Bay, and thence along the Peace River Valley to Port Simpson on the Pacific coast. The distance from Quebec to Port Simpson would be 250 miles shorter than that from Quebec to Vancouver by the Canadian Pacific Railway, and from Chicoutimi, the port on the Saguenay, to Port Simpson 370 miles shorter. The harbour of Port Simpson is considered to be the finest on the Pacific coast north of San Francisco. Such is the depth of the Saguenay River, the great tributary of the St. Lawrence, that Chicoutimi can be reached by vessels of any draught, and Quebec has docks which cost the Government $3,000,000 with deep-water berths and elevator facilities for steamships drawing (should such draughts ever be necessary) forty feet of water. The people of Quebec firmly believe that that port could be kept open for ocean vessels all through the winter, but in any case there could be no difficulty in making a winter port at Chicoutimi. The ice in the Saguenay is mostly salt-water ice, and the St. Lawrence from the Saguenay to the sea has none of the shoals and other obstacles which exist further up the course of the river towards Quebec.

A point to which attention is drawn, as being one of imperial significance, is that in the event of

hostilities with the United States the present Canadian Pacific Railway line could be broken in half a hundred places in a few days, but the Trans-Canada line, being 300 to 600 miles from the international boundary, protected by forts at Quebec, Saguenay, and Port Simpson, would be impregnable, and for this reason should receive the support of the Imperial Government. Another weighty consideration is that the Trans-Canada Railway will be the shortest all-British route to the Far East. The distance from Chicoutimi to Yokohama would be 720 miles shorter than from Quebec to Yokohama by the existing trans-continental line.

I must point out that the Trans-Canada Railway is only one of various trans-continental railway projects, and since the period of my visit to Quebec, this particular scheme has been rather put in the shade by the rival proposition of the Grand Trunk Railway Company. The objects underlying all these schemes, however, are the same, and it requires little prophetic gift to see that in course of time several independent railway systems will traverse the Dominion from east to west. The charter of the Trans-Canada Company has just been renewed for a period of ten years, but according to a statement made by Mr. J. V. Scott, who before the Committee of Railways of the Dominion Parliament opposed the Grand Trunk Pacific Bill, less than $500,000 has yet been paid up upon the subscription of $5,000,000 required by the charter.

Many were the adieus and hand-shakings at the Canadian Pacific Railway Station in Quebec when we first stepped on board the car "Bombay," which was to be our headquarters during weeks of travel

over thousands of miles of farm lands and prairie, forest, and mountain, and cañon. Many were the pressing invitations to come back for a longer stay; and so little did we know of the vast proposition before us that we held out hopes of complying with the invitation on our return from the Pacific coast.

CHAPTER III

MONTREAL: CANADA'S COMMERCIAL METROPOLIS

WE reached Montreal in early morning—too late to go to bed, too early for breakfast. We had leisure to inspect our quarters and surroundings in the Windsor Hotel, and the examination of our vicinage was calculated to produce a favourable first impression of the splendid city. No hotel in Canada is more celebrated for elegance, good management, and exquisite cuisine than the Windsor in Montreal, and from the American point of view the reputation is perfectly just. Overlooking the spacious Dominion Square, with its gardens, statues, shady walks, and the vast pile and dome of St. James's Cathedral, the Windsor Hotel occupies a splendid situation, and its public rooms have the air and dimensions of banqueting-halls. Many hundreds of visitors, mostly Americans, were staying in the hotel, but save at the dining-tables one was hardly conscious of their presence.

My most abiding recollection of Montreal is of a vast city—its population is about equal to that of Leeds—radiant with summer sunshine, of dusty streets shaded with maple, birch, and linden trees, and of crowds of well-dressed people flocking by every means of transport to the holiday resorts far

beyond the city limits. It was the morning of Sunday, 17th August, and having a forenoon off, I sauntered away to explore "on my own," never having found aimless roaming in a strange city unentertaining or unremunerative. Being an errant Scotsman, I did not fail to take notice of the female half of the population; but he would be an ungallant stranger indeed who was blind to the attractions of the women of Montreal. Stockholm is said to have the finest women of any European capital. I have seen the beauty and rank of the Swedish Kingdom assembled at a great national bazaar at which every beauteous baroness, arrayed in beseeming national costume, appeared to full advantage, and the show of good looks was wonderful indeed; but even in Stockholm I was less impressed and charmed by the feminine citizens than in Montreal. I do not mean to assert that the number of beauties was remarkable. I have no recollection of seeing a single beauty—none to compare with those dazzling blondes with long-braided hair, chiselled features, and statuesque forms whom one may meet in Stockholm. Nay, I did see one Montreal lady who was a noble representative of the Norse type of beauty, with perfect features, hazel eyes, and a wealth of auburn hair; but she was one of my fellow-passengers on the *Tunisian*.

What delighted me was the large number of well-favoured women of tall stature and good physique, presenting so pleasing a contrast to the diminutive females with wan cheeks and pinched faces who crowd the streets of our English industrial towns. For Montreal is the great industrial city of Canada. It is the only city in the Dominion comparable for

population and manufactures with cities like Liverpool, Manchester, and Leeds. Montreal is the seat of a great cotton industry; it has extensive engineering works and sugar refineries; it is the leading emporium of the Canadian provision trade; its shipping far and away exceeds that of any other Canadian port, and it is the banking and financial metropolis of British North America. No other Canadian city could be said to have a large factory population, but I saw no factory workers. The factory hand, male or female, of the type produced in England is not known in Canada.

I strayed along several streets admiring the endless concourse of well-dressed people, for the entire population had turned out for the Sunday holiday. The children, all well dressed, sturdy, healthy complexioned, and well nourished, gave me infinite delight; and I thought with pain of the children I am accustomed to see in the streets of British manufacturing towns, pale visaged, ill-fed, and miserably clad. I was not exploring the residential quarters, villadom, or the West End avenues. Chance directed my steps to St. Antoine, St. James, and Notre Dame streets, where the French-Canadian artisan classes live.

Finding the heat oppressive and walking fatiguing, I got upon a car in St. Antoine Street, and had a ride for several miles along that interminable thoroughfare, and then along St. Denis Street, right out into the open country. The length of the ride and the smallness of the fare caused me great astonishment. When the conductor collected the fares I gave him a 25-cent piece—equivalent to a shilling—and was surprised at receiving no change.

He handed me a strip of six little tickets which I supposed would all be needed ere we reached the terminus. Instead of that I was conveyed six or seven miles for one ticket—face value five cents, or 2½d.—and when the car reached the end of the metals, far out among the fields, the conductor politely inquired whether I wished to transfer!

Condition of the Working Classes.

At the car terminus I got out upon the Boulevard de St. Denis, an immense stretch of flowery moorland, interspersed with clumps of fir and birch and tangled brake, where children were plucking wild raspberries and lapfuls of Michaelmas daisies, purple vetches, and claret-coloured fronds of the sumach. The Boulevard de St. Denis was one of the most remarkable sights I beheld in Canada. Here beyond the city is an area several square miles in extent, once covered by the noble elms and sycamores of the Hochelaga Forest, now dotted over far as the eye can reach by dwellings great and small, chalets and "shacks," elegant frame houses, and cabins of corrugated iron, according to the tastes and means of the owners.

The land belongs to the municipality, which sells it in small lots at a trifling cost, from $10 upwards. Working men from the city acquire plots, build houses upon them—sometimes with their own hands—and lay out fruit, flower, and vegetable gardens. A great part of the Boulevard yet remains to be taken up, so that there is abundance of common pasture, and many of the "Habitants," in addition to keeping poultry, have a pony and cow. The

dwellings are scattered all over the place like stars in the sky; and though roads have been laid out at intervals, there is for the present no appearance of order or semblance of arrangement in streets. The Boulevard de St. Denis is a veritable artisans' "Garden City," all the nearer to the ideal in that the cottages are so thinly sown over a sunny wilderness where space is no consideration.

I got into conversation with a jovial resident of the Boulevard, who explained to me the whole system, and showed me over his house and garden. He was a corpulent, middle-aged Frenchman, with stiff black hair on his large round head, who laughed immoderately at the interest I manifested in the social institutions of the Boulevard.

Having satisfied myself as to the material well-being of the Montreal workers, who acquire plots and build homes on the Boulevard de St. Denis—which I understand is only one of several around the city—I was directed by my Gallic acquaintance to the electric railway for Sault-au-Recollet on the Back Water, to which I had a pleasant ride through green woodlands and orchards, amidst a crowd of light-hearted French people, all out on picnic parties for the Sunday.

As in other Roman Catholic countries, one never has to travel far in Lower Canada to discover a shrine where blended mirth and devotion soothe the spirit and sweeten the lot of humanity. At Sault-au-Recollet is the Convent of the Sacred Heart, which only interested me as being the rendezvous in the leafy Canadian forest where thousands of workers were seeking the consolation of religion and recreation from toil. In every glade

one saw picnic parties and romping children, all in their Sunday best, the women and girls in light-coloured prints, inexpensive but decidedly becoming and tasteful. Everything conveyed an idea of happiness and contentment such as I had never witnessed before.

The impression was not unjustified. The working classes in Canada are beyond dispute well off in comparison with the working classes of any country in Europe. On the following day the "British Editors" had a trip on the St. Lawrence in the steam launch of the Montreal Harbour Commissioners, whose guests we were, and at the luncheon on board, in responding to one of the toasts, I expatiated upon the evidences of well-being which I had seen among the workers. I had touched upon a theme of which the Canadians are justly proud. Several of the gentlemen present, among them was the Hon. J. Israel Tarte, then Dominion Minister of Works, adduced proofs of the assertion that there is no real poverty in Canada, pauperism being unknown, and there being neither poor law, poor rate, nor poor house in any town or province of the Dominion. The most striking illustration, however, which I received anywhere was at Victoria, where Mr. Hayward, the Mayor, told me that £1 per month covered all the charitable donations in the city, and he was sometimes at a loss to know how to dispose of the £12 per annum regularly voted by the City Fathers at Christmas for the purposes of benevolence. Large fortunes are not common in Canada. Millionaires are as rare as paupers, but enough and to spare is the almost universal rule.

It must be understood that during the past decade, still more during the past five years, there has been a great increase of wealth in Canada. A return just issued shows that the Savings Bank deposits are equal to $14.72 per head of the entire population of the Dominion, as against $12.04 in 1896, and $1.50 in the year after confederation. In addition to these there are deposits in the thirty-five public banks equivalent to £18 per head of the entire population. The deposits in the public banks have more than doubled within ten years. In 1892 they amounted to £32,900,000; last year (at the end of September) they were returned at £71,900,000. No other country has increased so rapidly in wealth during the same period, not even the United States, and I question if any other country can boast of a higher per capita accumulation of savings.

Montreal is remarkable for the length of the streets which run east and west parallel with the course of the St. Lawrence. The longest thoroughfares are, proceeding from the docks, Notre Dame Street, St. James Street, St. Antoine Street, and St. Catherine Street. While driving along the last-named street, in the company of Mr. Cochrane, the Mayor, and the Aldermen, we were amazed not only at the elegance and substantial architecture of the stone houses, but at the prodigious total into which the house-numbers run—upwards of four thousand! This interminable aorta of traffic is as long as that endless thoroughfare in Glasgow which, under five or six different names, extends from Dumbarton Road through Main Street into Argyle Street and London Road. The suburbs of every Canadian city

are delightful—if, perhaps, I except those of Winnipeg, which have an unfinished look.

Canadian villas, with their verandahs and latticed windows, have an air of brightness, a grace of fabric and design, altogether unknown in England, and owing to the profusion of healthy forest trees the grounds and gardens have a look of nature the antithesis of our formal parks and lawns. The absence of brick walls is another pleasing characteristic. Cottages and manors seem to be framed in one unbroken maze of flowers and foliage, for no Canadian would think of surrounding his estate with a six-foot fence. French influence is largely responsible for the style of architecture, especially in Quebec and Montreal.

Montreal is situated upon an island enclosed by arms of the St. Lawrence, and Mount Royal is the only eminence of any considerable height in its vicinity. The view from the apex of Mount Royal is little, if at all, inferior to that from the Dufferin Terrace at Quebec. In one respect it takes precedence; its sweep is only limited by the powers of vision, and its expanse defined by the arc of a boundless plain of teeming fertility. Around the skirts of the mountain, wooded from base to summit by tall, dark-plumed conifers and umbrageous flowering trees, lies the city, occupying the near distance. The stately churches, colleges, and convents of Montreal might vie with those of the proudest capital in Europe. Spires and church towers innumerable, and sovran among them all the great dome of St. James's in Dominion Square, proclaim the religious fervour and the multiplicity of creeds professed by a rich, cosmopolitan, and liberally

governed community. Nor are the temples the only conspicuous structures which serve as landmarks in the sea of masonry. The banks and insurance companies have reared massive and lofty piles, these with the immense railway stations and towering hotels denoting the magnitude of the city's commerce. Every tint is warm and bright. Pinkish masonry and white-painted wooden houses gleam in the sun; but the sea of burnished roofs is dappled with the green foliage of convent gardens, the shady avenues and broad *campus* of McGill University, and the bowers and lanes that denote the precincts of suburban affluence.

In the middle distance, encircling the city's ample sweep, is the blue St. Lawrence, fringed with the docks and shipping, and studded with numerous islands. Like a slumbering leviathan reclining on the bosom of the water is the long fabric of the Victoria Jubilee Bridge, over two miles in length, the engineering triumph of the Grand Trunk Railway. The eye follows the St. Lawrence until in the far distance it is reduced to a silver streak meandering through a billowy expanse of emerald and azure. In parts of the remotest horizon, almost a circle of the earth's spherical surface, hills of softest blue faintly align the melting of the landscape in the sky. The Vale of Tempe is no fairer a prospect; but the persistent attentions of the hucksters of Indian curios, guide books, and similar ware leave the stranger small leisure to feast the eyes upon the enchanting prospect. They render one useful service, however, in supplying spectacles with brown glass—the colour of Cairn-Gorm quartz pebbles—through which the eye can discern in-

finite detail and distance in a scene which, like the sun's corona, overtaxes the powers of unaided and unprotected vision.

Navigation of the St. Lawrence.

After a morning spent among the groves of Mount Royal and the gardens at its base of McGill University, the Academy of Canada, an excursion on board the steam yacht of the Harbour Commissioners of Montreal afforded us an opportunity of meeting some of the most prominent men in politics and commerce in Canada. The chair at the luncheon on board was taken by the Hon. Robert Mackay, the President of the Commissioners, and among others present were the Hon. J. Israel Tarte, Minister of Public Works, Mr. Robert Bickerdike, M.P., Mr. Raymond Préfontaine, M.P., and His Worship the Mayor, Mr. James Cochrane. Altogether about fifty of the leading public men of Montreal, representatives of every branch of its manifold industry, either members of the Harbour Commission or as guests of the Commissioners, joined in the excursion, and a finer body of public men never assembled on the deck of any vessel. They were no less remarkable for their big bodily frames and well-to-do appearance than for their exceptionally intelligent faces. There is no mistaking the fact that in the New World the fittest come to the front, and in any gathering of leading citizens the percentage of drones is much smaller than it would be in a corresponding gathering in England. The incubus of the hereditary magnate oppresses neither enterprise nor society in America as in Europe.

It was no small matter to face the water music. Involved Canadian politics, difficult commercial problems and far-reaching schemes flowed with the same plenitude as the champagne; and while the clatter of dishes and the drawing of corks filled the floating marquee within, the summer's day and the sparkling waters without were rendered hideous by the long shrill screech on her steam whistle with which every passing steamer saluted our flag, and by the deafening turmoil of the hoppers and chains of the myriad dredgers at work all up and down the ship channel. The toast list evoked the whole political platform of the commercial statesmen whose aim is the development of Canada's illimitable resources and the creation of lines of transport for the same from the grain-growing West to the ports of the St. Lawrence River. Mr. Tarte, who had just returned from an oratorical outing and exploratory tour of Ontario, dilated upon the rapid settlement, the growing wealth, and the promise of a record harvest in the Great West, and drew forth rapturous enthusiasm by a statement of his policy as Minister of Public Works in regard to the construction of the Georgian Bay waterway and other canals for diverting the Canadian grain traffic from the railways of the United States. This is the supreme ambition of Lower Canada.

As our trip extended for miles down the river, we had a splendid opportunity of appreciating the magnitude of the task of converting the St. Lawrence into a navigable channel for ocean-going vessels. From St. Augustine, near Quebec, where the new railway bridge is being built, all the way up stream to Montreal, a distance of one hundred and sixty

miles, the river is shallow and beset with shoals and sand-bars. In no part of this long stretch did the original depth at low water exceed twenty-five feet; over the long basin situated about midway, called the Lake of St. Peter, the original depth was only ten and a half feet, and at other places where the water spreads out over a broad channel there was no more than six feet of water. The enterprise of the Dominion Government, which has expended millions upon the work, and the public spirit of the citizens of Montreal, which has inspired the whole undertaking and handed out liberal contributions of money, have constructed a clear ship channel throughout the entire distance of a depth of twenty-seven and a half feet at ordinary low water and a minimum width of three hundred feet. At curves in the course the width is much greater—six hundred feet at Pointe du Lac curve in Lake St. Peter. Not content, however, with the twenty-seven and a half feet deep channel, the Commissioners are now dredging a thirty-foot channel of a minimum width of four hundred and fifty feet, and thirty miles out of the sixty requiring to be dredged have already been completed. At some points nearly five miles of this deep waterway have been excavated.

The dredging of the ship channel, however, by no means exhausts the comprehensive programme of works now being executed in connection with the harbour of Montreal. The existence of the Harbour Trust dates back to the year 1830, and the work of making Montreal into a seaport may be said to have been in progress ever since. It may be explained that the entire harbour and the basin, up to ordinary

high-water mark, are public property, and are under the control of the Dominion Government. As in most of the large harbours in Canada, however, the immediate management of the port of Montreal is placed in the hands of a local commission, in this case the Harbour Commissioners, whose functions are not only administrative, but extend to the construction of piers and similar works, and even the raising of money by the issue of bonds. Their jurisdiction appertains to most of the machinery of navigation from Montreal to Quebec. The wharves extend for miles along the river front, and are equipped with all the latest mechanical appliances for the rapid loading and unloading and storage of cargoes. The shipping of Montreal exceeds that of any other Canadian port. The tonnage of sea-going vessels entered and cleared in 1901 was 2,109,773 tons. Victoria, in British Columbia, occupied the second place with 1,969,996 tons. Halifax, Nova Scotia, came third with 1,627,533 tons; then followed St. John, New Brunswick, with 1,146,840 tons, and Quebec with 1,079,167 tons. Contrary to what many people might suppose, the shipping of Victoria exceeded that of Vancouver by more than a million tons. If I am correctly informed, about $3,000,000 has been expended since 1898 upon the dredging of the St. Lawrence, and other $3,000,000 upon the construction of piers and other harbour works at Montreal. This expenditure is exclusive of the cost of erecting several grain elevators of monstre capacity, part of the expense of which is being borne by the Grand Trunk and Canadian Pacific Railways.

But all these preparations would be unavailing to

secure for the St. Lawrence route the whole of the grain traffic from the West to England so long as there are inadequate facilities for bringing the freight eastward from Manitoba to the head of river navigation at Montreal. Neither the existing railways nor inter-lake canals are anything like equal to present, still less future, requirements. Although, owing to the closing of navigation following so soon upon the end of harvest, it would be absurd to hope that the whole crop will ever be moved by water, still it will be necessary to turn to account every auxiliary which possible water-borne shipments offer, and if only money can be raised Nature has conferred upon Canada more than one available route. The Trent Valley waterway will this year or next connect Lake Huron with the Bay of Quinte, in Lake Ontario, but there is a still greater scheme under consideration which would bring Montreal into direct communication with Lake Huron, and obviate all the obstacles and difficulties encountered in navigating the lower lakes. This is the Georgian Bay waterway, by the Ottawa River to Montreal. The cost of this vast engineering feat is estimated at $80,000,000 (£16,000,000), but this is not a large figure for a work of such magnitude and importance, not only to Canada, but to the Western States of America, which are likewise seeking a water outlet for their upper lake trade to tide-water. Eighty million dollars is the computed cost of a twenty-foot waterway from Georgian Bay, an arm of Lake Huron, through Lake Nipissing to the River Ottawa and along the course of that river to its *embouchure* in the St. Lawrence, about fifteen miles below Montreal. The construction of this canal seems

to offer the most satisfactory solution of the great transportation question — the most vital of all questions to the people of Canada—so far as transport by water is concerned.

Our trip with the Harbour Commissioners lasted several hours. There was not so much to see as upon the Clyde or the Mersey, but there is more work in process of construction at Montreal than at either of these crowded estuaries of British shipping, and our hosts were determined that we should see the whole. The excursion over, we were glad to get back from the heat and the glare upon the busy river, from the dust, the din, and the turmoil of the docks, to the leafy shade of Dominion Square.

CHAPTER IV

CROSSING THE GREAT LAKES

AT Banff Springs Hotel, in the Canadian Rockies, distant from London five thousand two hundred miles, I was told by the landlord that for three years past one of his guests for a couple of months during summer had been a wealthy London lady, who had announced her intention of spending her holidays at Banff as long as she lived, for the reason that she had only to change her berth twice between London and Banff—once at Liverpool and once at Montreal. There is no accounting for taste. I quite agree that the nine days' trip from Liverpool to Montreal, thanks to the diversified character of the cruise up the St. Lawrence, affords nine times more pleasure than one day's sailing on the North Sea; and for my own part I would rather spend three days in an American *train de luxe* than three hours in an English first-class passenger coach; still, I am at a loss to understand the somnolent mental state of the wealthy tourist, to whom train acceleration can be no object, who preferred the long railway journey by the Lake Shore to the delightful break afforded by sailing for a couple of days and nights over the sea-like expanse of Huron and Superior.

The traveller bound for Winnipeg who elects to take the Lake Route may visit Toronto on his way from Montreal to Owen Sound, the port on Georgian Bay for the steamships of the Canadian Pacific Railway. Georgian Bay is the name given to that huge north-eastern arm of Lake Huron almost separated from the main body of water by Manitoulin Island and a long neck of land which, running north from the Niagara Peninsula, almost cuts Lake Huron in two. As in the course of ages the level of the waters of Huron gradually subsides, Georgian Bay will become a separate basin; but by that time Lake Erie, which is only eighty-four feet in depth, will have dried up altogether, and the whole lake area will have shrunk to about half its present dimensions. By the raised beaches along the shores, the geologist can perceive upon how enormous a scale the lake area has already been contracted since the Glacial Epoch.

Although the Canadian Lakes are the largest fresh-water lakes in the world, their combined superficies is less than that of either the Caspian Sea or the Black Sea alone; a fact which most of the Americans on board the C.P.R. steamship *Alberta* did not know, and seemed disposed to dispute. Their other favourite assertion, overheard in conversation at every meal, that you could sink England in Lake Superior, Lake Huron, or Lake Michigan, is equally absurd. The area of the two largest lakes is not equal to that of England, and the distance from Owen Sound, over Georgian Bay, Lake Huron, and Lake Superior, to the head of lake navigation at Fort William, is only 555 miles. Lake Superior could not even consume Scotland without

great discomfort; but the lakes are truly noble for all that.

However palatial the interior, an American "floating palace" is far from beautiful in external appearance. She lies upon the water like a misshapen three-decker, less graceful in her lines than an old-fashioned Dutchman with blunt bows and no stern counter. Her towering topsides are painted white, with yawning ports almost to the water-line, and her whole appearance is top-heavy, as though her *forte* were to turn turtle in a capful of wind. Despite their unnautical model, however, these ships are highly seaworthy and "handy" in a storm, and are as safe as they are commodious and well appointed. The great feature of the internal arrangements is the immense height of the saloon ceiling. The smallest Lake steamer has a saloon loftier in the roof than the biggest ocean-liner afloat, and this character gives to these boats the hotel-like appearance for which they are famed. As a rule, there is but one saloon, which extends the whole length of the vessel from bows to stern.

But, however unsightly, when berthed at the quayside, these American galleons may seem to those accustomed to the low, schooner-like build and clipper bows of British pleasure craft, it must be admitted that when under steam, with decks crowded, ensigns spread, and the sun glancing upon their high-banked decks, they present a most imposing appearance. We had two glorious sunsets upon the Lakes, two of the most resplendent among the many Canadian sunsets we beheld. These Canadian sunsets are of long duration.

For hours every evening the landscape—or the water if you are sailing—is bathed in a succession of glowing lights—at first the palest golden yellow, then, with ever-changing splendours, every shade of red and crimson flame, until, the sun having dipped, only soft, rosy fires light up the lowest level of the western sky. The zenith glows with opalescent green, and the eastern sky is chilled with violet and shadowy indigo.

The splendours of a gorgeous sunset and moonlight on the waters did not exhaust the glories of that night. The heavenly bodies were unusually propitious. Towards midnight the planet Jupiter, effulgent in the South, became the most conspicuous object in the heavens, and the identification of the glorious star became the subject of no little speculation among those who preferred the cold wind and the stars on deck to cosy quarters and solo whist in the saloon. It is not often that one sees a crowd of people constrained by the brilliance of the firmament to pay homage to the starry hosts. The nightly procession of the constellations, the most impressive spectacle the universe affords, seldom excites even momentary attention among ordinary mortals, and that night upon Lake Huron was one of the few such occasions I can remember.

When morning broke the scene was completely changed. We were cruising amid beautiful islands, with the Great Manitoulin over the starboard bow. This large island takes its name from Manitou, the Great Spirit of the Huron Indians. Here was Manitou's abode, and the Happy Hunting Ground of departed braves. For ages no Indian dared set

foot on its dread shores. In the Hudson Bay days Manitoulin was a favourite resort of hunters in search of the black bear, which is still found in the island, though it is more common in the woods on the adjacent mainland. Most of the picturesque islands in these waters are now under cultivation, and enjoy a great reputation as fine farming locations, and ideal retreats in summer. When passing Desbarats Island we came close in shore, and looking over the bulwarks, looked at many a delightful chatelet perched upon a rock right at the water's edge. Some of these are the summer residences of rich Americans from the large cities on the southern lake shores. Ladies and children would wave their handkerchiefs and exchange greetings as we sailed smoothly and slowly past. The islands were mostly low rocky ledges, wooded to the strand, but as we neared the "Soo" these rocky islands gave place to low swampy flats of red boulder clay. All was calm, clear, and beautiful, ideal Canadian life and scenery—water, rocks, and pines, the odour of the pine-trees everywhere.

The "Soo" Canal.

Ever since breakfast we had been meeting barges laden with iron and copper ore, coming from the "Soo" Canal. As we entered the narrows we encountered these unsightly leviathans in a constant stream only about a boat's length apart. Mammoth dredgers cutting away the boulder clay on each side of the channel next disfigured the scene, and we found that we had quitted Lake Huron for Hoylake Channel, an artificial waterway opened a few years

ago by which about twelve hours' navigation from the mouth of the St. Mary's River has been saved. After crawling for about a couple of hours through the broads of this fen country we emerged upon the swift current of the St. Mary's River, and beheld the foaming rapids, the International Bridge, the canal locks, and the twin cities of Sault Ste. Marie overspread by a curtain of furnace smoke from the iron works of the "Canadian Soo."

Apart from the interest aroused by the evidences of engineering industry and the grand sight of the Rapids, there is not much about the celebrated "Soo" to charm the traveller by the Lake steamers. To understand the importance of the "Soo," and to comprehend the magnitude of its multifarious resources, destined to raise it to a position of paramount importance among the cities of central Canada, one has to land and to tarry for some days among its "strenuous" citizens. We might have halted on our way to the West, but at that time all the American world was hieing to the wheat belt, where reaping was now in full swing. The Lake steamships were thronged, and the west-bound trains were crowded. Harvesters were flocking to Manitoba in thousands, and politicians, financiers, and men of business were thronging westward to the Empire's Granary, where the assurance of a bountiful harvest was absorbing the attention of the Dominion, and even arousing curiosity in England. "Winnipeg," remarked a Boston man in the *Alberta*, "is to-day the bull's-eye lantern of the Dominion." Thus it came about that a visit to the "Soo" was reserved for our return journey when homeward bound.

We did not see the "Soo" to advantage when going through the canal. The sky became overcast, and for the first time since our arrival in Canada we had a shower. The canals were congested with traffic, and we had to wait for about three-quarters of an hour admiring Uncle Sam's customs sheds on the American side. The difference in level between Lake Superior and Lake Huron is no more than eighteen feet, but the rapids are rather more than a quarter of a mile long. In breadth they are about the same, and although in some places the water is lashed up in foaming breakers, it is quite safe, and is indeed a favourite pastime—to shoot the rapids in Indian canoes. To enable shipping to pass the obstacle three canals and locks have been built by the Canadian and United States Governments at an expense of $20,000,000. These canals are twenty-one feet in depth, and it is the proud boast of the New World that a greater tonnage passes through these waterways annually than through the Suez Canal. The latest comparative statistics I have seen relate to the year 1899, when 3,480 vessels passed through the Suez Canal and 20,255 vessels passed through the St. Mary's Canals. The net registered tonnage was: Suez Canal, 9,893,082; and St. Mary's Canals, 21,958,347 tons. Since that time, while the commerce passing through the Suez Canal has remained practically stationary, that passing through the St. Mary's Canals has greatly increased. In 1881 the Suez Canal tonnage was more than double that of St. Mary's. Since then the latter has increased by several million tons every year, the increase some years being more than 25 per cent. In 1886, the first year of huge iron-ore ship-

ments, it was 40 per cent. During the past two years the bulk of the increase has arisen from the augmented grain traffic, which promises in course of time to outweigh the cargoes of iron-ore.

Once through the locks, the "Soo," with its monster blast furnaces, soon faded from sight as we bore out upon the broad bosom of Lake Superior. With the factory smoke we also left the clouds and the rain, and had an afternoon of glorious sunshine and sparkling waves, to be succeeded by another splendid sunset and the nightly procession of the stars.

On the following morning we again found ourselves in a miniature archipelago. Lake Superior, like the St. Lawrence above Montreal, has its Thousand Islands. They fringe all the north shore, and, many of them being formed of trap rocks, their appearance is more rugged and romantic than any we had yet beheld. About noon we rounded Thunder Cape, and, dropping into Thunder Bay, beheld the towns of Port Arthur and Fort William, which mark the western terminus of the Lake route.

CHAPTER V

HEAD OF LAKE NAVIGATION

THE appearance of the ports of Fort William and Port Arthur as seen from the bay is not exactly prepossessing. They are straggling embryonic places, with grass in places growing in the wide streets. Huge tenement-looking houses are scattered at intervals all round the muddy foreshore, and the acclivities behind the town are, for a Canadian landscape, meagrely clothed with vegetation. The whole place is suggestive of an overgrown trading post in the woods rather than of a great distributing centre in the heart of a productive continent.

The Scottish proverb says that "fuils and bairns should never see half-dune things," and he would be a short-sighted observer indeed who flung gibes at these neighbouring cities in their present inchoate state, hardly beyond the townsite stage in their history. Though ramshackle in appearance to-day, Fort William and Port Arthur will at no distant date form one fair and opulent city, for which they have the physical basis as well as the commercial opportunities. The terrace on which they stand still bears the marks of the stripping of the forest. It will afford space for magnificent thoroughfares and tier

upon tier of masonry ascending from the beach to the encircling eminences that command the superb prospect of the broad bay landlocked by the frowning promontory of Thunder Cape and the outer cincture of Pie Island and a host of smaller basaltic isles. The bay owes its existence to a partially submerged reef of doleritic sills, and from the bluffs behind Port Arthur the view of these volcanic monuments, rising in grim majesty from the tranquil, gleaming waters, is one of the most romantic I beheld in Canada. The columnar ribs of greenstone recalled the islands and promontories of Argyllshire. Indian fancy and superstition, keenly susceptible to the romantic and prone to associate physical objects with religious beliefs, gave to the most prominent object in this panorama, the long promontory which ends in Thunder Cape, the name of Niniboujou, or the Sleeping Giant. Standing sentinel at the opposite side of the entrance to the bay is another commanding basaltic pile, Mount Mackay, the fragment of a once stupendous volcanic cone.

Our boat at first hove to opposite Port Arthur, where we saw the largest jamb of logs we had yet come across. The logs were estimated to contain some millions of feet of sawn timber. Presently we put about and drew slowly towards the monster grain elevators which indicated the locus of the wharves of Fort William, five miles to the south of Port Arthur. Here upon landing we found many of the leading men of both towns waiting to give us a cordial welcome to the west, and ready and able to indicate the foundation upon which reposes the assured future greatness of the ports which mark the

extreme western limit of the long chain of inland navigation, one thousand miles from Montreal, another thousand from the Straits of Belle Isle, or two thousand miles in all from the Atlantic Ocean. It is not rash to predict that within the next quarter of a century it will be possible for ocean-going steamers to load up with grain at Fort William and never break cargo until berthed at Liverpool, four thousand miles from the head of Lake Superior.

Monster Grain Elevators.

Fort William, which to-day has a population of 5,000 people, only commenced its municipal career ten years ago. Before 1892 it was merely a trading post of the Hudson Bay Company, and the surrounding country is still an important fur district. We were told that both Fort William and Port Arthur are "run" by Americans, and the leading men are indomitable "hustlers." We went for a trip up the Kaministiquia River, than which there can be no more sluggish river in existence. Unlike the volcanic islands outside the bay, the shore here is a mud flat, and the Kaministiquia resembles a bottomless black moat filled with stagnant water to the lip, which is only indicated by the selvage of rank sedges and pond weeds. This singular river, which is greatly admired by the natives, is navigable by steamers of deep draught for about twenty miles from its mouth, when further progress is blocked by the Kakabeka Falls. The Kaministiquia is not unlike the lower Ouse, but is decidedly deeper, and serves as a natural harbour. A little way above the muddy

delta the banks are composed of firm peat and clay, and here are erected coal staithes and mammoth elevators, the largest in Canada. They constitute one of the wonders of the New World.

The Fort William elevators differed entirely in type from any others we saw in Canada. They are constructed upon a novel principle, are known as tank elevators, and resembled a collection of rather elongated gasholders, from which they differ, of course, in not sliding up and down on the telescopic principle. A fire had recently destroyed part of the installation, and we could still sniff the odour of the empyreumatic materials. The elevators were then empty, but a number of workmen were busy repairing the damages in preparation for the press of grain deliveries as soon as threshing commenced. It was explained to me that these elevators had a capacity of 3,000,000 bushels. The tanks are of two sizes, the larger ones capable of holding 157,000 bushels and the smaller ones capable of holding 56,000 bushels. Twenty-four tanks have now been completed, but forty-eight in all are to be built. Fort William and Port Arthur already have storage capacity for 7,000,000 bushels, elevators for other 3,000,000 are in process of erection, and upon a very conservative estimate, according to the local land commissioner, five years hence the ports will have elevators in operation with an aggregate capacity of 20,000,000 bushels.

This estimate is entirely credible. Fort William is the chief grain point for the Granary of the Empire, and few towns in the West may be expected to rise more quickly in importance. Every year the western crop increases in volume, and every season a

larger proportion is hurried to the seaboard before the Lake navigation closes. In the seasons 1901 and 1902 from 500 to 600 cars, each holding from 600 to 1,000 bushels of wheat, came into Fort William every day, and as fast as they arrived the corn had to be delivered to the elevators and transferred to ships. Herculean efforts are put forth to have the elevators empty before ice blocks the waterways, in order to have full storage capacity available to store grain over winter in readiness for the spring shipping. Throughout the winter months the grain is brought down for storage in an uninterrupted stream, though without the feverish rush of the Fall.

Having finished our inspection of the tank elevators, and satisfied ourselves that the weird mechanism of the conveyor-belting and other appliances for the prompt handling of grain were constructed according to the highest standards of efficiency, we left the sullen Kaministiquia, nothing doubting that in the fulness of time—and that right speedily—its waters and banks, now the habitation of lizards and water-fowl, black bass and jack-fish, will be transformed into a crowded and sooty alley of staithes and steamships, by which time its awe-inspiring name will have become less strange to British ears. I did not inquire what Kaministiquia implies. I should think it is the equivalent in the language of the Huron Indians of Styx or Lethe.

Farming in New Ontario.

Buggies, or "rigs," as they are called all over Western Canada, were waiting to take us into the country to see the progress that is being made in

agriculture in this comparatively unknown region of British North America. The four districts of Nipissing, Algoma, Thunder Bay, and Rainy River, which collectively constitute the vast province that goes by the name of New Ontario, seem to have long been undeservedly overlooked as fields for settlement. The scenery and the capabilities of New Ontario are more diversified than in any other part of Canada, and although a large proportion of the surface seems intended by Nature to retain its primeval state for all time, much larger areas are of high fertility, and its mineral deposits are rich and varied. Not only does New Ontario contain the most extensive deposits of nickel-ore on the face of the earth, important mines of copper and a fair amount of gold, but the discoveries of the past few years have disclosed the existence of inexhaustible supplies of hæmatite at widely scattered points from Sudbury in Nipissing to Lake Nipigon in Thunder Bay. One of the events of the Fall of 1902 was the announcement that an American syndicate had obtained from the Provincial Government of Ontario a tract of cultivable land some millions of acres in extent for purposes of settlement.

The anatomy of a Canadian "rig" is similar to that of a spider save that wheels take the place of the arachnid's ambulatory appendages. It was at Fort William that we first enjoyed the glorious sensation of tearing in a rig over primitive trails, over farm lands and forest clearings, through creeks and precipitous gullies. We were taken to visit what was evidently a show farm, but there was abundant cause for astonishment as the whole place had been covered by pine and tamarack less than

ten years ago. The forest stumps were still standing in the parks, where cattle were browsing on the rich natural grasses. The whole farm was fenced, the steading was a model of cleanliness, convenience, and commodiousness, and the lands under grain and root crops were tilled with the fastidious diligence of an Aberdeenshire farmer. The whole place, in fact, had the appearance of a Scottish farm, even to fields of hay where Timothy grass took the place of the favourite Italian rye grass of the Scottish farmer. The agricultural lands of Ontario are well adapted for mixed farming, and it was clear to demonstration that an intelligent farmer with some capital—as Mr. Smith, the owner of this location, certainly is—may soon find himself the owner of a delightful and profitable place. Mr. Smith has established a dairy to supply Fort William with milk. His finest cows were specimens of the Holstein breed, and his byre was equal to anything I have seen in Scotland. Everything about the farm had to me a very familiar aspect, far different to the entirely novel style of farming we were soon to be introduced to in Manitoba. Mr. Smith seemed to go in for everything which would turn a penny—cereals of all sorts, roots and hay, dairying, stock raising, sheep, pig, and poultry keeping. Of all the farms I visited in Canada this one in Thunder Bay was most to my own taste, possibly because the style of farming closely resembled that with which I am most familiar.

On returning to Fort William we took the electric tramway for Port Arthur. In Canada people do not wait till a town has a population of a hundred thousand to start tramway cars. As soon as it has

been realised that a place has potentialities, every facility for expansion is provided, and these facilities are invariably far in advance of current requirements. When the "British Editors" visited Fort William and Port Arthur probably neither town had a resident population of four thousand, but the two towns were connected by an overhead electric tramway furnished with large and handsome cars. In the evening a car gaily illuminated with electric lamps of all the hues of the rainbow, similar to one with which the Mayor and Aldermen of an English city with nearly half a million inhabitants amused themselves when celebrating the declaration of Peace, was brought forth to give us a spin, and the townsfolk a treat, through the leading streets. Port Arthur is the eastern terminus of the Canadian Northern Railway, and there we had the pleasure of seeing a train-load of steel rails, smelted from Canadian ore at the Canadian "Soo," being forwarded for the laying of the track of that rapidly extending system some hundreds of miles to the North-West in the province which takes its name from the mighty Saskatchewan. At Port Arthur we were shown over the first great lumbering establishment we had seen, the saw-mills and landing-stage of the Pigeon River Lumber Company, an American company which during summer has been working day and night since its inception a few years ago, and now has a capacity of about twenty million feet of timber per annum.

CHAPTER VI

TRANS-PRAIRIE RAILWAY TRAVELLING

ON leaving the banks of the sullen Kaministiquia our long railway journey through the Prairie Provinces began. Two thousand miles of metal track lay between us and the Pacific coast. Our train was timed to leave Fort William at 20.50 o'clock, but at 19 o'clock the Imperial Limited which should have passed through at 17 o'clock had only reached Port Arthur, and the Pacific Express, it was ascertained, was several hours late. It may be explained that by 20.50 is meant that gloaming hour which, until the head of navigation in Lake Superior is reached, is indicated in the more familiar method of computing time as 8.50 p.m. In the immeasurable West the customary diurnal method of reckoning is found incommensurate with the distances of travel and the discrepancy between schedule time and express performance. In the C.P.R. "Annotated Time Table" it is stated that the "24-hour system is in use on the Western and Pacific Divisions. By this system the a.m. and p.m. are abolished, and the hours from noon to midnight are counted as from 12 to 24 o'clock." In addition to this chronometrical innovation, which is purely a railway arrangement, there are four changes

in civil time between Montreal and Vancouver. Between Montreal and Cartier in Algoma the standard is known as Eastern Time; from Cartier to Brandon in Manitoba it is Central Time; from Brandon to Laggan in the Rocky Mountains it is Mountain Time; and from Laggan to Vancouver, Pacific Time. These distinctions, however, never give the traveller a thought, as, once West of Winnipeg, time and space are regarded with equal unconcern, and meted out with equal prodigality. Indeed, by the time you have reached the "Soo" you discover that Canadians make little discrimination between night and day.

When it seemed that at Fort William we should have to school our impatience and habituate our minds to the colonists' disregard of the flight of time, a harvester excursion came up from the East, our car "Bombay" was hitched on behind, and to the sound of the accordion and the banjo and the clanging of the big bells of two monster locomotives we sped away for the Golden West in the society of a crowd of some eight hundred boys of all sorts gathered from Lower Canada and the New England States. The great majority of our fellow-passengers were honest enough fellows, many of them the stalwart sons of Ontario farmers—of powerful build and mahogany-tanned with the sun—but there was a sufficient mixture of downright "stiffs" from the Atlantic towns of America to give the whole company a character not exactly prepossessing.

The Car "Bombay."

The car "Bombay," placed at our disposal by the

Canadian Pacific Railway, had come with us all the way from Quebec. Brown, the coloured porter in charge of "Bombay," and the "British Editors," as we were called all along our progress, were by this time old acquaintances. Travellers invariably speak kindly of the dusky grooms-in-waiting, attired in grey uniform, who attend to the comfort of the passengers in the sleeping cars of the Canadian railways. Few have such opportunities of learning their worth, or have so many kindnesses to acknowledge, as we had in our six weeks of rambling journeys and counter-journeys wherever the vast system of the Canadian Pacific Railway has metals laid in the Dominion sub-continent. Our attendant Brown had hardly a distant resemblance to a negro. Many, or most, of the car porters are unmistakable niggers—fat, jocund, and glossy-skinned—but Brown was lithe and tall, like a high-caste Hindoo, and until small-pox had marred his features, had been a decidedly handsome quadroon.

The upholstery of the car "Bombay" was all that artistic taste could design, and the accommodation everything that ingenuity and experience could devise. As there were sleeping berths for twenty-six persons, and we were a company of thirteen—whose happy experiences belied all the superstition associated with that cabalistic number—we never felt cabined and confined, although, commodious as the smoking-room at the rear of the car was, we might have preferred, if that retreat had been spacious enough to afford seating accommodation for us all at one time along with any guests—mayors, senators or premiers, M.P.'s or M.P.P.'s—who happened to be convoying us along part of

the route. "Bombay" was invariably littered over with maps, Government publications, specimens of cereals, mammoth fruits and vegetables, fossils, photographs (in all stages), and mineral specimens. But how vain was all this array of professional paraphernalia! Who could pore over statistical pamphlets, blue-books about dairy farms, Indian reservations, land regulations, or mining laws, while luxuriously rolling past scenery of unsurpassable loveliness—rock-bound lakes, rivers pouring down gloomy cañons, waterfalls leaping hundreds of feet over alpine precipices, or even while crawling, as it seemed, for days on end through an endless paradise —in the old Greek sense of the word—of golden grain, or green and flowering prairie? Then the air was so soporific and the noonday heat so languorous, if one could keep one's eyes open at all, it was to recline on the moss-green, velvet-plush cushions and look with dreamy gaze on the slowly-changing scene, so wild yet so tranquil, so vast yet entrancing by its very immensity.

Save the occasional discomfort arising from the fine sand swished against the windows of the carriages by the rushing wind created by the motion of the train, there is hardly a discomfort amid the luxuriousness of railway travelling over the Prairie Steppe. So impalpable is this sand, that sometimes it seems to invade the carriages not only through the screens of fine gauze which may be substituted for the glass windows, but even through the joints of the closely-fitting, double-glass windows themselves. The very fineness of this sand, which doubtless contains numerous particles of magnetite struck off from the track metals, renders it all the more gritty and

irritating to the skin. Still, the discomfort is only occasional, for every possible precaution is taken to exclude dust, and there are often long stretches over which all the windows may be kept open, allowing the fragrant breath of the prairie flowers free ingress and egress to refresh the travellers and mitigate the heat of the sun-scorched plain.

The car "Bombay" was so lofty in the roof that, without demolishing all our overhead bridges or heightening our tunnels, it would be impossible to run anything so magnificent on our English railways. The woodwork was of Bird's-Eye Maple, richly carved, and the furniture plush of a sap-green shade. In upholstering these sumptuous cars every variety of tint is employed. We saw cars decorated in China blue, in old gold, in Venetian red, and pale yellow. When the heavy folds of the tapestry curtains are unfurled and the false roof is swung down to supply the upper tier of sleeping berths, the transformation from an airy lounge to a darkly canopied dormitory is complete, and then there is no place for social intercourse but the smoke-room.

Lake of the Woods Region.

In all Canada there is no more beautiful scenery than along the four hundred miles which separate Winnipeg from Lake Superior. It has not the grandeur and sublimity of British Columbia, nor is it romantic in the true sense of that term, as much of the scenery of the province of Quebec is romantic. Still it is ineffably beautiful, and I should pronounce it the most characteristically Canadian scenery of all. It recalls at every turn the scenes

pourtrayed in the novels of Fenimore Cooper, read when we were boys, or the visions conjured up by the faithful diction of Longfellow's "Hiawatha." That the poet of the Red Man's Sagas truthfully represented his savage heroes I do not assert, for upon that point I am not qualified to express an opinion. What I do say is that Longfellow so faithfully delineated the Red Man's country, that I seemed to have a perfectly just conception of its scenery before I had the opportunity of verifying his delineation. For nearly a whole day the train passes through a land of lakes. These may be counted by the hundred, and are of all sizes, from large navigable lakes to tiny rock-bound pools. Sometimes they are separated by mere sills of rock, at other times by green wooded knolls, again by high craggy bluffs. We journeyed through this fairyland on a tranquil August day. There was not a ripple on the surface of the pools to mar the reflection of the rocks and birches mirrored in the glassy liquid deep. In England a few square miles of such scenery would be famous. Here it is lavished with continental prodigality, its beauties reserved for the stars and the angels of heaven. Still, there are oases of habitation and industry in this picturesque wilderness.

From the fact that there are seventy stations on the Canadian Pacific Railway between Fort William and Winnipeg, one might suppose it to be a densely populated region. Many of these, however, are mere flag stations, and the train by no means stops at all of them. For my own part I could have wished it to stop more frequently, for scenes of beauty like these are not seen often in a

lifetime. Where there is a little community one generally finds a saw-mill, for the Lake of the Woods is quite an important lumber region. Then there are gold-mines and flour-mills and some industries far more exceptional still. There is the edible frog fishery, and even in the old Hudson Bay Company days, Rat Portage was celebrated for its caviare. The sturgeon roe, from which caviare is made, exported from this busy point constitutes a large proportion of the world's supply. Rat Portage has a population of about seven thousand, and its suburb Keewatin boasts the largest flour-mill in Canada. The residents are also beginning to devote their attention to the building of pulp-mills, a departure which it is to be hoped will not result in denuding this sylvan paradise of its verdure. Hitherto the forests have chiefly been put under contribution for timber for telegraph posts, fence props, and fuel for the steamships. We saw no trees of great size, mostly birches, the loveliest in the world, white poplar and aspen, small cedars, larches, spruce, and jack pine. The profusion of forest wealth is nothing compared with the profusion of sylvan beauty, and if I had my way I should proclaim the whole district a national park.

As it is, in summer time the citizens of Winnipeg come to the islands in the Lake of the Woods to camp out or build themselves cottage-bowers. Canada is so bountifully endowed with scenery that for the present no thought is taken for its conservation. But the time may come when, with the destruction of the forests and the desolation spread by that industrial Tamerlane, the pulp-manufacturer, the people of Canada may rue the

desire which at present animates every mother's son among them, to convert their seemingly inexhaustible physical heritage to mercantile account. "Man marks the earth with ruin"—at least that variety of man we call civilized.

CHAPTER VII

WINNIPEG: THE CANADIAN CHICAGO

WHILE no Canadian city interested me more than Winnipeg, it failed to excite my admiration, or engage my affections. In other large towns I felt that had I been offered a situation I should at once have accepted it, but it would take a tempting bait to make me fix my abode at Winnipeg. For this I can only give a woman's reason—I did not like it. For one thing, I never like flat towns. This may be an early prejudice. The principal street of my native village is at an angle of 30 degrees, and the associations of infancy may warp my judgment. Winnipeg is as flat as Hull or Cardiff, and the streets of the latter are the most wearisome I ever trod, save those of St. Petersburg. If I wished to flatter the people of Winnipeg I should compare their city to the capital of Peter the Great. It certainly does not deserve the comparison, but Winnipeg forcibly reminded me of a Russian town. The length and breadth of the streets and the huge size of the buildings were suggestive of modern Russian cities, but what possibly gave realism to the resemblance was the number of moujiks and Finns wandering about the streets. A sprinkling of Slavs wearing the habiliments of the country of

their origin was all that was required to complete the delusion. To that might be added the cloudless sky and the glare of the sun on the massive white buildings, conspiring to increase the resemblance.

I must not, however, wrong Winnipeg—of which any one who has seen the cities of Russia would at

MAIN STREET, WINNIPEG.

once acquit me. If ever Main Street, Winnipeg, rivals the Nevsky Prospect, the leading thoroughfare of the Manitoban capital will be second to none on the face of the earth. Winnipeg is an amazing place. I do not know what my casual acquaintance precisely meant when he said it was the "Bull's-Eye of the Dominion," but I am inclined to think he was right. It is only thirty-three years since Wolseley

led an army from Fort William to Fort Garry to quell the Riel rebellion. The city of Winnipeg, with a population of sixty thousand, now stands where at that time the lonely fort of the Hudson Bay Company provided a rendezvous for trappers and officers of the Company. The greatest part of the increase has been within the past decade, and that increase has been constantly growing in volume. In 1902 building permits were issued by the municipal authorities representing an expenditure of $2,375,950, as against $1,587,227 in 1901, and $1,350,000 in 1900. Nearly one thousand buildings were erected, a large percentage of which were the property of working men, a sure criterion of well-being.

Winnipeg is the business centre of the West; it has (in American journalistic parlance) an area tributary to it equal to the whole of Central Europe. The growing importance of that area may again be illustrated by the emigration statistics. Winnipeg is the great centre for the distribution of immigrants, a fact which explains the number of outlandish folk one sees in the streets. The population of Manitoba and the Territories was augmented last year by about one hundred thousand souls. A total of sixty-nine thousand immigrants registered their names at the Immigration Hall between January 1st and the close of the emigration season last year. The total for the year 1901 was only 37,595, and from all appearances the ratio of increase will go on increasing for some years to come. The emigration statistics, however, do not cover all the arrivals. The officials estimate that fully 25 per cent. of the immigrants belong to the independent class, who do not require the

assistance or advice of the department, and therefore give no notification of their arrival to the authorities. Winnipeg is at present the only, and will in all likelihood always be the chief, inlet and outlet for all the trade of the fertile North-West. Contrary to general opinion, Winnipeg is not within the fertile belt. It is situated upon the periphery of the wheat-growing plains, and Brandon, one hundred and thirty miles further west, claims the distinction of being *par excellence* the "Wheat City of the West." But Winnipeg almost monopolises the stir and strain, the roar and concourse of an *entrepôt* of the world's trade.

On stepping out upon the platform at Winnipeg we again beheld groups of emigrant families for the first time since leaving Quebec. The sight revived all the feelings with which I mingled among them on the deck and in the steerage of the *Tunisian*—a strange blending of emotions, choking pity mixed with high hope that seemed also to shake the frame and bring tears to the eyes. They were seated in family parties all round the bare shed which serves as a waiting-room to this important station, obtaining what meagre refreshment their slender means could procure at the indifferently provided bar. We had little leisure, however, to concern ourselves with these exiles—the word is unfortunate; fugitives, I should rather say, seeking new and happier homes, and a better country. Mr. Obed Smith, the Commissioner of Immigration, was waiting to receive us upon the platform, and soon we were surrounded by quite an assemblage of representative citizens.

A Community of "Hustlers."

By the time the "British Editors" reached Winnipeg they were no strangers to the bare-faced utilitarianism of the New World. It would certainly be a mistake to imagine that Americans and Canadians are more deeply sunk in the worship of Mammon than the inhabitants of the British Islands, though to superficial observers we might seem innocents when contrasted with a continent of cities cackling like frenzied barn-door fowls from ocean to ocean. To advertise the superior merits of one's town or province seems to be the sole and darling occupation of every community. In singing the praises of his town the humblest citizen is as zealous, and as well informed, as the Mayor or the President of the Board of Trade. Boys and girls, hotel waitresses and shop girls, can reel off statistics illustrative of their city's growth, and talk as glibly of the natural advantages it possesses for purposes of commerce, as the editors of the local papers. How many of the inhabitants of Manchester, Birmingham, or any other English city could tell you what were the clearances of the local banks in the past year? How many of their inhabitants have ever heard of such things as bank clearings? In Winnipeg any one could give you full particulars for a decade back. Topics of this description are matters of ordinary conversation, and in the newspapers of eternal iteration.

I am prepared to maintain that the fervour of local, or as it seems to us parochial, patriotism, and the copiousness of information with which it is expressed and enforced, does not arise solely from

the relatively simple interests of a city like Winnipeg—simple, that is, in contrast to the infinitely complicated activities of a city like Manchester, for instance. The chief reason for the intelligent interest which every Canadian takes in the town in which he lives arises from the prospect which he sees of deriving personal advantage from its prosperity. If he is a poor man to-day, he does not despair of being a rich man to-morrow. Independence, if not affluence, is within the grasp of every man, and every individual has a rational personal aim in throwing himself, or herself, heart and soul into the furtherance of the weal of the place in which his or her lot is cast.

In Canada wages are high and land is cheap. In England wages are low and the price of land is prohibitive. In England ninety-nine men out of a hundred despair of becoming rich or owning property before they are five-and-twenty. In America a man does not abandon hope of dying rich however old he is. In a large English city the vast majority of citizens take no interest in its affairs—save the vulgar interest of the gossip. Working men and salaried officials, the bulk of the population, only take a detached and impersonal interest in the fortune of industries whose prosperity, they believe, will only enrich their employers. A man must keep up the pretence of being absorbed heart and soul in the business which belongs to another. From the waste of his time, and the exhaustion of his strength, he endeavours to rescue what small fraction he can, and if he is a man of any individuality, seeks in the pursuit of some congenial hobby—happy if his means will admit of it—to obtain

some compensation for his wasted life. Thousands incapable of, or debarred from, anything more intellectual, find occupation for their minds in following the annals of sport.

In a new country, and among lusty communities, it is quite different. Every man fights for his own hand. The servant of to-day believes that he may be a master to-morrow, and the master knows how to treat the servant as one whom he may yet have to meet as an equal. Every one participates in the common "hustle," and the entire community is saturated with a common stock of information and ideas.

Winnipeg will hold its own with any hustling point in America. It is a "live city"; about that there can be no mistake. We had scarcely emerged from the station buildings when copies were distributed to us of the "Manitoba First Primer," a brochure comical, statistical, and pictorial, illustrative of the industries of the province and their rapid growth in recent years. From the primer I learned that Manitoba is a corruption of two Indian words, Manitou Wapa, "God's Country"; and I hope to show that not without good reason has the Indian appellation been retained. Here I may mention that it is wrong to pronounce "Manitoba" with the accent on the final "a." The accent is on the "o," which is pronounced long, thus—"Manitōba." "Winnipeg" is also of Indian origin, meaning "muddy water." The name is appropriate, as the Assiniboine and Red Rivers, which unite their floods at Winnipeg, are always discoloured by fine aluminous silt.

One is not surprised at finding in the outskirts

of cities as populous as Montreal and Toronto mansions evidently the residences of men with large incomes. When, however, we come to cities with populations under fifty thousand, the number of such residences excites the Englishman's wonder, as the impression is conveyed of whole communities revelling in opulence. The astonishment is not lessened when one takes into account the cost of building, the high wages of skilled labour, and the enormity of rents for house property in Western Canada. I do not know whether the speculative builder has yet invaded Western Canada. For the present I believe the majority of people, even artisans, own their own houses, but that, of course, is only another evidence of well-being. In Winnipeg and Vancouver the large number of big private houses was particularly noticeable. In Winnipeg we were no less struck with the immense size of the business establishments. A considerable part of Main Street, which must be one of the broadest thoroughfares in the world, is composed of banks, insurance offices, and the premises of land companies and other financial institutions. Conspicuous among big buildings is the great head depôt of the Hudson Bay Company, one of the most massive business blocks I have yet beheld.

Moral and Material Progress.

The whole of the Prairie country is a comparatively treeless tract, and the citizens of Winnipeg cannot luxuriate in the forest shade like those of Montreal and Ottawa. No large trees relieve the panting heat of the sun-scorched streets, though

in the rush of money-making in a new hive of industry such matters have not been entirely lost sight of. In the suburbs and outside the town extensive groves of the Manitoban poplar and other native species have been planted, and as these come to maturity they will temper the hot breath of the Manitoban noonday in summer. Winnipeg lies somewhat to the south of the fiftieth parallel, or almost as far south as Paris, and has an average summer temperature of 60°·1 F.

We drove from the station to the south-western verge of the town, where a large public park, watered by one of the great rivers that flow into Lake Winnipeg, has recently been acquired for the benefit of the townspeople. Here we were banqueted in a spacious erection which I believe had served as an exhibition building. This entertainment was remarkable in two respects. In the first place no alcoholic beverages were served, and in the second, one of the speakers, the Mayor, delivered a speech into which was compressed more statistical matter than I could have believed it possible for any man to recollect. With regard to the first point, I must, of course, declare that the "British Editors" were the last men in the world to care a straw whether champagne, Radnor Water, Roman Punch, or tea and coffee were the drinks provided. Indeed, one of our spokesmen heartily complimented the Town Councillors of Winnipeg on the splendid example they set, and on the success they attained in fêting guests without debauching them. If some members of our party rather resented the utterance of this compliment, it was because it seemed to imply a reflection upon the public bodies of other

cities whose views of entertainment were less progressive.

What was really deserving of note was that the incident illustrated the manners of the inhabitants. Manitoba is the temperance province of Canada. So powerful is the temperance party that, as I subsequently learned, our coming had placed the Town Council in a dilemma. They wished to give us a "good show" for the honour of the town, but felt that to provide intoxicating drinks would be to set up a most dangerous precedent. Alas that it should be thought that strong drink is indispensable in entertaining Englishmen! Fortunately the City Fathers were relieved from their dilemma by Mr. Puttee, M.P., who had been one of our fellow-passengers on the *Tunisian*, and could bear testimony that the "British Editors" were not a body of men so vulgar and mercenary as to set store by alcohol.

The Hon. R. P. Roblin, the Premier of the Legislative Assembly of the province, was in the chair, and delivered an address in which he presented us with the "freedom of Manitoba," and discoursed upon the progress which the Far West is making in education and culture as well as in material aggrandisement. The Premier's contention was just, and his admonition timely, for there is no error into which the visitor to Manitoba is more apt to fall than that of supposing that the whole population is engrossed in the pursuit of wealth.

No feature of Canadian life is more noticeable, from Nova Scotia to Vancouver, than the dignity and importance attached by all classes, by every creed and race of Canada's diversified population, to

the instruction of the young; and the assertion is made that, in proportion to their means, the Canadians provide more liberally for education than any other people whatsoever. We were unfortunate in visiting Canada during the vacation, when the Universities and High Schools were closed, when the children at the Public Schools were having their holidays, and when only the small country schools in the prairie were open; for in the thinly peopled regions of the West it is necessary to keep the schools open throughout the summer owing to the difficulty of maintaining regular attendance during winter. But wherever we went we were struck with the size and the number of the school buildings. Seminaries of learning are as numerous and conspicuous in Canadian cities as convents and churches are in the cities of Spain; and as in the latter country the traveller comes upon shrines and monasteries remote from all other signs of habitation, so in the Canadian West one may come upon little schools in the heart of the prairie where settlers' cabins are so few and widely separated that one wonders where the chubby-cheeked bairns have come from.

In Manitoba the rural schools are about every three miles or so apart in the settled districts; and the instruction provided is, of course, free. Mr. Roblin mentioned that one-eighteenth part of the whole Fertile Belt from the Pembina River to the Saskatchewan, has been set apart for the maintenance of schools. In every township embracing thirty-six square miles two sections of one square mile each have been assigned for educational purposes. Out of the proceeds of the sale of these

lands a fund, administered by the Government, is being built up which, as time goes on and the land is taken up, will be sufficient to cover the entire cost of national education from the Kindergarten to the University. In Manitoba likewise a special reservation of 150,000 acres has been reserved for the provincial University at Winnipeg. Mr. Roblin showed that in Manitoba there is a teacher for every two hundred and forty people and for every forty children. The entire value of the school property of the province is equal to nearly $3 per head of the population, a condition of things which might make Manitoba the envy even of Germany.

Owing to the sparseness of the population, education in the Territories is at present comparatively costly. The total taxes which a settler is called upon to pay generally run from $7 to $8—28s. to 32s.—per annum, but from $5 to $6 of this small cess is taxation voluntarily levied for schools. The organisation of school districts is optional with the settlers, but it is difficult to find a locality where schools have not sprung up. The districts formed must not exceed five miles in length or breadth, and must contain at least four actual residents and twelve children between the ages of five and sixteen. Cases have been known where the requisition for a school, signed by the heads of families, has been presented to the Minister of Education on the day that the twelfth child attained its fifth birthday! Far from complaining of the school tax, it is a subject of honest pride. Mr. McKay, the Mayor of Brandon, spoke of the citizens of the "Grain City of the West" as a community to

be envied and admired, because they enjoy the distinction of paying the heaviest school taxes in Manitoba.

Well-being of Manitoban Farmers.

The speech of the Mayor, Alderman Russel (to resume my narrative) was an epitome of all that can be said of Winnipeg, or at least of all that the inhabitants of that city pride themselves upon. In 1870, the year from which Winnipeg dates its foundation, there were (to reproduce the gist of His Worship's remarks) 215 settlers on the ground. Ten years later the place could boast of a population of 6,178, and the successive stages of increasing populousness were as follows:—1890, 23,000; 1900, 42,534; and 1902, 48,411. In 1880 the total assessable value of real and personal property in Winnipeg was $4,008,460. By 1900 it had increased to $25,077,460, and the growth of two years brought it to $28,615,810 by 1902. In 1871 Winnipeg opened its first school with 35 pupils. At present there is a school attendance of upwards of 8,000. Manitoba in 1891 possessed 774 public schools; 1,419 in 1901. In 1891 $457,231 were spent upon education; in 1901 $1,310,805,—this being exclusive of the expenditure upon the provincial university. But of all the statistics of Winnipeg's growth none are so remarkable as the yearly returns of the Clearing House. The total for 1895 was $50,540,648. For 1899 a total of $107,786,814 showed that business had more than doubled, and that there had been no slackening in the pace appeared from the return of $134,199,483

for 1901—equivalent to 7·17 of the total clearings for all the cities of the Dominion.*

Then we were told that whereas in 1891 Manitoba had only a railway mileage of 1,235 miles, the railways now in operation have a mileage of 2,346 miles. Whereas ten years ago the province only possessed an elevator capacity of 7,628,000 bushels, the county is now dotted over for hundreds of miles with elevators, more than 600 having been constructed with an aggregate capacity for storing nearly 30,000,000 bushels of wheat. The latter figures, however, relate to the entire West from Fort William to Calgary and Edmonton. Fort William and Port Arthur between them have more than one-third of the whole elevator capacity of the wheat-growing provinces of the Dominion. During the past decade the Manitoban wheat crop had increased from 23,000,000 bushels to 50,000,000 bushels (the harvest for 1901), and in that year the area under crop only amounted to 2,952,000 acres out of an area of 25,000,000 acres of cultivable land. The entire area of the province is upwards of 47,000,000 acres, but a considerable part of it is covered by lakes. The point was also impressed upon us that no wheat land in America is so fertile as that of Manitoba. Whereas during the past ten

* The figures for all recent years will be completely eclipsed by the record for 1903. The increase in business at Winnipeg is shown by the Clearing House statement for May, giving an increase of nearly $7,000,000 over May, 1902. The following are the May returns for the past three years:—1901, $8,681,057; 1902, $13,912,319; 1903, $20,689,973. The statement for the opening week of June indicated that business was increasing by leaps and bounds, a record of 4½ millions for that week contrasting with less than two millions in the corresponding week of 1901.

years the average yield of wheat per acre in the United States has only been 13·3 bushels, Manitoba could point to an average of 19·92 bushels. As a matter of fact the Manitoban wheat average for 1901 was 25 bushels, contrasted with 14·8 bushels in the United States wheat-growing States:—North and South Dakota, Missouri, Nebraska, Kansas, Minnesota, and Iowa. Lastly, the wheat crop of Manitoba in 1901 was valued at more than $25,000,000, and what with the other crops the 35,000 farmers of the province—a mere handful—had an income in 1901 of nearly $40,000,000—$39,368,051.77 to be exact, for in Manitoba they compute these things to the second decimal.

Converted into sterling, the result, which was evidently meant to strike the imagination, is not so marvellous. It works out at an average income for the Manitoban farmers of about £225 per annum; but allowance must be made for the fact that of the 35,000 farmers, probably more than one-third were homesteaders who had taken up quarter-sections of free Government land within the past two or three seasons, and had not yet got more than half a dozen acres under cultivation. Our experience showed us that many a peasant who holds 160 acres of land rent-free is passing rich with much less than $1,000 (£200) of yearly income.

In Manitoba and the Territories (to pursue the subject a little further than the Mayor) there is not as yet great accumulated wealth. The statistics of the Post Office Savings Banks are no criterion to the wealth of the people, for out of a population for the whole Dominion in 1901 of 5,371,051 there were only 157,368 depositors, having balances of

$39,950,813. At the same date (June 30, 1901) there were deposits in the Chartered Banks amounting to $315,775,429. Only 46 Savings Banks had been opened in Manitoba as compared with 501 in Ontario, but at the same date the Chartered Banks had opened 52 branches as compared with 349, and in 1902 the number of bank offices all over the West was largely increased. Therefore, although the appended table of the amount on deposit in the Government Savings Banks per head of the population is no criterion of wealth, it shows that the hoardings of the people are much larger in the older provinces than in the new, into which the majority of the inhabitants have come in recent years very poor, often absolutely penniless :—

	1902.	1901.	1895.
Ontario	$12.33	$11.81	$8.99
Quebec	4.22	4.01	2.88
Nova Scotia	18.22	18.05	18.88
New Brunswick ...	29.12	27.87	23.78
Manitoba	5.04	5.02	4.70
British Columbia ...	12.61	13.19	9.35
Prince Edward Island	21.70	20.86	20.77
The Territories	1.11	1.18	0.80

When it is remembered that thousands of poor creatures in a state bordering upon destitution are finding homes in these vast plains every year, these figures are sufficiently remarkable.

The increase in savings bank deposits has taken place in face of a constantly increasing influx of homesteaders, the class of settlers who come from the poverty-stricken rural populations of Europe to take up free Government land holdings. The fol-

lowing table shows the total homestead entries for the past seven years:—

1896	1,857
1897	2,384
1898	4,848
1899	6,689
1900	7,426
1901	8,167
1902	14,832

A very large proportion of these homesteaders are men who bring their wives and families along with them, and the influx of such persons naturally depresses the per capita showing of the savings banks. All the immigrants, however, are not poor homesteaders. A numerous class bring sufficient means to buy land in the vicinity of railway stations, and have personal belongings of considerable value. This is especially true of the farmers, who for the past year or two have been flocking to Canada from the United States. The following figures show at a glance the salient features of immigration during the last two seasons. For the fiscal year ending June 30, 1902, the total number of immigrants entering Canada was 64,634, compared with 49,149 for the year ending June 30, 1901. They were as follows:—

	1901.	1902.
British	11,810	17,000
European Continent	19,552	23,535
United States	17,987	24,099
Total	49,149	64,634

The United States settlers were by far the best off, as the following table, showing the declared

value of the effects imported by immigrants, shows:—

	All Countries.	United States.	Great Britain.
1901 ...	$3,740,000	$2,915,000	$801,000
1902 ...	4,580,000	3,751,363	802,313

Of the 64,000 emigrants who settled in Canada in 1901, 33,504 were farmers. Of the whole number 26,145 found homes in Manitoba, and 28,929 in the North-Western Territories.

I hope as I proceed to render the significance of these figures apparent. I cannot risk disgusting my readers with more statistical matter for the present, and would apologise for having taxed their patience thus far by reminding them that the peopling of the Far West is not only the most important of all Canadian problems, but is, or ought to be, the most interesting of Canadian problems to the people of the British Isles.

CHAPTER VIII

THE PRAIRIE WHEAT-FIELDS

THE end of August found Winnipeg in a state of bustling activity and congested traffic—not the congestion of freight traffic which arises from the handling of the grain crop, but through the concourse of travellers of all classes who flock to this centre at the ingathering of the harvest. Train-loads of emigrants were still arriving. Indeed, August last year was one of the busiest months at the Immigration Hall. Harvester excursion trains, each bringing several hundred workmen from the Eastern provinces, were arriving daily, to be distributed from Winnipeg over all the farm lands of the West. Then 1902 was an *annus mirabilis* in the history of Manitoba.

"In Winnipeg to-day," said one man to me, "there is more 'hustling' than in the city of Chicago. All the representative houses in Canada and the United States, dry goods, hardware, and all sorts, are starting places in Winnipeg. The value of land for business premises and dwelling-house sites has nearly doubled this year, and there is a scarcity of materials to build the erections, for which permits have been granted. All the hotels and houses are crowded, and last night three hundred people were

refused accommodation at the hotels and had to walk the streets, though well able to pay for lodgings."

On the morning of the day following our arrival in the Manitoban capital I journeyed to Crystal City to visit the Prairie Home Farm of the Hon. Thomas Greenway, one of the most distinguished agriculturists of the province. I was accompanied by Mr. Charles Young, president of the Winnipeg Corn Exchange, and on the journey we were joined by Mr. G. H. V. Bulyea, the Commissioner of Agriculture for the North-West Territories, and later on by Mr. Young's brother, Mr. Findlay M. Young, a member of the Dominion Senate. To all these gentlemen I must express my obligations for a vast amount of practical information about farming in the Far West. Later on I again met Mr. Bulyea and had the pleasure of being driven by him over the great wheat-fields in the vicinity of Indian Head and the Qu'Appelle River, a giant affluent, which contributes to the Assiniboine a volume of water equal to its own. The brothers Young proved to be fellow-travellers as companionable as instructive, and as they were the first Canadians with whom (since landing in Canada) I was brought into close contact for any length of time, I have pleasure in recording the pleasant memory of our intercourse. I learned the easy, natural, and familiar habits of society in Western Canada, and was delighted to meet men who, while having the simple manners of farmers, have the business aptitudes of the Stock Exchange. I observed this about all the Canadian farmers we met.

More than half a century ago Dickens remarked that the plot of land which it would pay English farmers to cultivate is the small enclosure within the ring-fence of their own skulls. Canadian farmers neither require the advice nor merit the taunt. The Canadian farmer is not content to know the price of wheat at the neighbouring corn market. He studies the world's markets; he can tell you the course of prices in Duluth, Chicago, Liverpool, and London for ten years past. He follows the statistics of visible supplies, and can tell you all about the wheat crops of Russia, Hungary, and Argentina, as well as about those of the United States and Canada. With him farming is a scientific business both as regards the rearing and the marketing of his crop. These remarks are, of course, inapplicable to the majority of the homesteaders of foreign nationality. A point deserving special consideration is that large numbers of Manitoban farmers were not farmers to begin with at all. They have been recruited from all classes, and among those whom I actually met one had started life as a schoolmaster and one as a minister of the gospel. "Rule of thumb" has never been established in this New World agricultural paradise.

Crystal City is situated on the Pembina branch of the Canadian Pacific Railway in the extreme south of Manitoba, close to the Dakota boundary. You do not get into the wheat belt proper until about forty miles from Winnipeg. For the first part of our journey little could be seen from the carriage windows save interminable stretches of grassy knolls covered with a bushy yellow chrysanthemum called "Golden Rod," another more showy mauve chrysan-

themum, and a dwarfish thistle, the "Prairie Thistle," having a bright purple inflorescence. All over the prairie the Compositæ are the dominant order, and are represented by countless species. After passing through a ranching country where large herds of cattle were seen browsing on prairie grass about a foot high, we emerged upon the wheat

TYPICAL RAILWAY POINT WITH ELEVATORS.

plains of the Pembina River, the transition to the genuine prairie being so gradual that our arrival in the "Granary of the Empire" was only proclaimed by the elevators which now reared their unsightly forms at every station. Between Winnipeg and Crystal City we passed fourteen stations, and fifty-four elevators, four stations having as many as seven

elevators each. These wayside elevators are comparatively small structures. Their average capacity only runs from twenty to thirty thousand bushels, and though seemingly towering structures on the level landscape, they are seldom more than forty feet high.

We first passed through a tract known as the Menonite Reserve, which extends for thirty-six miles by twenty-four. These Menonites were among the early settlers in Manitoba, and are now accounted an opulent and exclusive class. They are among the most frugal inhabitants of the West, one of their many expedients for producing all the necessaries of living on their own soil being the practice of making a substitute for coffee out of barley. The Menonites deserve praise for the labour they expend in beautifying their homes, which are invariably surrounded by woods and shrubberies, an attention to comfort and elegance of country life too much neglected by the British section of the farming population. In this part of Manitoba there is land which has been under cultivation for twenty years without manure, and the practice of subsoil ploughing has never been resorted to. Menonite farmers are said to have sometimes raised fourteen consecutive crops on the same land, averaging twenty bushels to the acre.

In the adjoining Red River Valley are farms which have been cropped for thirty years without manure, summer-fallowing (to which I shall afterwards refer), or subsoil ploughing, the only rest allowed to the land being the alternation of an occasional crop of barley. In the heaviest of the black land of the Pembina and Red River Valleys the farmers allege that they have to avoid summer-

fallowing in order to prevent a *too luxurious* growth. Mr. Young, however, said this land was not now bearing the crops of former years, and the careful farmer was beginning to understand the necessity for only cropping land two seasons in succession, summer-fallowing the third.

The train pulled up at every station. A group of farmers was in waiting to pick up harvest hands, and quite a little feeing market took place. In addition to the elevators there are depôts for harvesting machinery at every station, and a great collection of Massey-Harris binders, Bain waggons, and all sorts of agricultural accoutrements was spread about. Still, every station seemed as sleepy as a country station at home—or more so—and the villages, or cities, as they are called, had a monotonous similitude. A large wooden hotel, painted white, a broad street of straggling stores, the depôts for agricultural machinery, the row of brick-red elevators close to the railway track—these were the familar objects at every stopping-place. To these might be added a few elegant dwelling houses, the residences of well-to-do local storekeepers, bank agents, and such like. Although the Manitoban farmers are said to toil like niggers, the country in summer had as slumberous an aspect as the most dreamy and lazy vale in rural England.

A Typical Grain Point.

On our arrival at Crystal City, which had nothing to differentiate it from other points along the line, we were received by Mr. Greenway, the ex-Premier of Manitoba, and other influential citizens. The

measure of consequence in this part of the world is the number of elevators and their capacity. Gretna, the principal point on the Pembina Railway, has eight elevators and a capacity of 174,000 bushels. Crystal City, notwithstanding its high-sounding title of Oriental suggestion, has only four elevators with a capacity of 95,000, but the elevators all along the line are capable among them of affording storage for close upon 3,000,000 bushels. During 1902 there had been quite a boom in the building of elevators. Though at the leading points the big railway companies own some of these indispensable appliances, the ordinary station elevators are mostly the property of two large public companies, the Ogilvie Flour Mills Company of Winnipeg and the Lake of the Woods Company, whose headquarters and flour mills are at Rat Portage. The only inscription upon an elevator is "Ogilvie's, No. 97," "Lake of the Woods, No. 63" (to take numbers at random), printed in large white letters which can be seen at a considerable distance. Altogether there are about 550 elevators along the Canadian Pacific Railway and its branches. When driving out from Crystal City we could see where the town lay by the roofs of the elevators at eight or nine miles distance.

In the afternoon teams were hitched, and we sped away on our first buggy ride among the interminable fields of ripe golden corn. Two horses as a rule are yoked to the spider-looking Canadian vehicle known as a "rig," and according as the carriage is provided with one or two seats it affords accommodation for two or four occupants. The rig in which I rode might be described as a four-wheeled gig for two persons, resembling in many respects the gigs used

for racing with roadsters, save that our rig was drawn by a pair yoked in the ordinary manner with a pole and the minimum of harness. My companion was young Mr. Greenway, who had never been beyond his native province of Manitoba. He was born on the Prairie Home Farm, and was in every respect a typical son of the soil. A companion more qualified to supply the information of which I was in search I could not have encountered.

In his "Voyage of a Naturalist" Darwin observes that the first impression of the scenery of the Pampas, when he visited the Province of Buenos Ayres, disappointed him. In a level country we erroneously expect to see a landscape of boundless extent, whereas the more level the plain the more limited is our horizon. So flat are many parts of Manitoba that the field of vision is sometimes limited to a few fields of wheat; and I actually saw points where four great wheat-fields met where, even standing in a buggy, I could see nothing save an expanse of yellow corn as far as the eye could reach in every direction, but sharply defined and disappointingly circumscribed, like the restricted stretch of waters one sees from the deck of a ship.

But dead levels of this depressing character are exceptional, and one seldom drives far without coming to tracts that rise and fall in long sweeping undulations from the eminences of which landscapes that are, or are suggestive of, vast extent are opened out. But however the sweep of vision might be enlarged, the dominant features of the scenery remained the same—an illimitable ocean of golden grain, gleaming in the sunshine, which entranced but jaded the senses of the beholder. Poetical as

the similitude may be, there is some extenuation for the diction employed by every Canadian journalist who, in describing the crops of Manitoba, says that the train rolls through an ocean of golden grain as a ship rolls through the blue waters of the sea.

This contains the usual license, though hardly the exaggeration, of poetical comparisons. The error is involved of representing the crop as solely consisting of wheat. In 1902 only slightly more than half the average under cereals in Manitoba was devoted to wheat, and even in the most highly cultivated parts of the province there is still much unbroken prairie. The pleasure of riding around any Manitoban farm is greatly enhanced by the stretches of wild prairie land, variegated by flowers and redolent with their scent. The prairie is the natural pasture of the country, and the farmer's reserve of virgin soil. Mr. Greenway, like most of the exemplary Manitoban farmers, is a thorough believer in mixed farming, and had less than one-third—700 acres—of his immense farm under wheat. He had about 250 acres in oats, and large fields of barley, in addition to root crops, and a wide range of prairie pasture.

Our excursion on the afternoon of the 22nd of August extended far beyond the bounds of Mr. Greenway's ample domain, for needless to say the ex-Premier farms his own land, which repays the prime cost every three or four seasons. Land around Crystal City has trebled in value within the past two years, land purchased at $5 an acre two years ago now selling at $15. The whole of his farm, like many others hereabout, is well fenced, and among the many sights of his model holding is

a herd of pure-bred shorthorn cattle, the strain of which he imported from Scotland. We found the cattle roaming among the prairie grass, where they had been out all the summer, and their wonderful condition at once evoked my admiration. Prairie cattle have the reputation of being all hair and horn, but these animals were in the pink of condition, symmetrical, deep and level fleshed, like the "fence-fed stots" of a Buchan farmer. They reminded me of the three-year-olds one may see on Aberdeenshire and Banffshire farms wading knee-deep among long second-year's clover.

Our ride over the long straight trails, or natural roads that divide the fields, took us about fifteen miles from Crystal City. The exhilaration of the outing was indescribable. The trail is for the most part turfy and springy, though stretches of deep dust, as incoherent as blown sand, where the road has been cut up by waggon-wheels, give a decided advantage to the occupants of the first of a procession of rigs. Over these trails, Mr. Greenway told me, a horse can perform a journey of fifty-five miles without feeding, returning over the same distance on the following day. These Western ponies advance at a great rate with a long steady trot, and the motion is, as a rule, smooth and easy both to horse and rider. Farmer-like, the attention of the driver is wholly absorbed in inspection and admiration of the crops. He pays no heed to the team, who follow their own sweet will, as you discover on coming to some rocky and rutty point, when the rig plunges and staggers in the craziest fashion, and the occupants are bumped and pitched about until their fundamental parts are black and

blue. My chief fear in these devils'-cantrip episodes was that the rig would be smashed to pieces. Your Canadian driver regards the rig, the team, and the bones of his travellers with equal complacency, never blinking an eyelid so long as there is a centre of gravity in terrestrial objects.

The "Prairie Home Farm."

On the day of which I am writing all was plain sailing, and I had undivided leisure to interrogate my companion and study the face of the country. Every now and then the whirring din of binders came on the ear, and we drove across a score of fields where two, three, four, and even six reaping-machines were clattering around the standing corn, mowing it down by swathes of several yards at each circuit of the harvester train. The men on the binders had faces tanned as I had never seen human skins tanned before, almost as black as coffee, but I do not think their work is anything like so arduous as that of men doing similar work in England or Scotland. Canadian harvesting-machines are light in the build, the crop is thinly sown, and is short in the straw, and an exceedingly long stubble is left. The teams are also light, and the binder rattles along sometimes almost at a canter. Though Mr. Greenway keeps Clydesdales, and has some fine Scottish stallions, farm horses of the weight of the Clydesdale, Shire, or Suffolk Punch breeds are extremely rare in Western Canada, and indeed most of the horses I saw would be of no use for farm work in England or Scotland. A hack, or "yaud" (to use a very expressive old Scots word), of any description,

is pressed for service, and for harness anything that will tug or tie seems to be thought all that is needed. I would not have it inferred from what I say that there are no good horses on these farms. Magnificent horses there are in abundance, especially on the ranches; but the average practical farmer can get along quite well without high-priced pedigreed animals.

Your Western farmer thinks of nothing save utility. The Scottish ploughman, who takes a pride in his sleek pair, who polishes his glossy harness and shines his buckles till his horse-collars are like mirrors, would be shocked to see the "duddy" and dirty appearance of a Canadian team, whose harness had never got a lick of paste since it left the saddler's. But it is this rigorous spirit of utility, manifested in every detail of farm management, which makes the American farmer victorious in competition in the world's market. His land, his horses, his machinery, his farm buildings—all are looked upon and handled in the same spirit of relentless utilitarianism. Nothing is kept for show, no labour is expended for effect, and every cost is analysed to the last cent. What will suffice is the measure of equipment, and what will produce the measure of labour. The fastidious Scottish farmer likes to see his furrows as straight as a line of light and of uniform depth; he must have equal distances between his turnips, and his "stooks" set equidistant like a pattern on his field. All such weaknesses are despised by the Canadian farmer as waste of time and energy. "Dirty" farming suits him admirably so long as the "dirt" is not injurious to his crops. In Canada there is an utter absence of

that pride in farming so characteristic of Scottish agriculturists, masters and men, to which in no small degree their success and pre-eminence in the past has been attributable. "Thorough" was their rule; "indispensable" is the American. Well for the latter if their system does not extend to bleeding the land.

On returning from our ride we had supper at the bothy of the Prairie Home Farm. The table was bountifully spread, and all the viands were the staple fare of Mr. Greenway's assistants. In Canada they never speak of farm servants, labourers, hinds, fee'd-men, or anything of that sort. About twenty eatables at least were placed on the table, including beef, pork, and salmon; but even allowing that throughout Canada it is customary to treat the farmer's helping man on a footing of equality with himself and his family, I cannot suppose that all Canadian farm hands are so well off as those in Mr. Greenway's employment. The Prairie Home Farm is certainly a show place, but if it would be misleading to represent this farm as typical of Manitoba, it would be wrong not to point out that Mr. Greenway, like scores of other men, has demonstrated what the possibilities of farming in Manitoba are. His success—for I understand that the ex-Premier is a wealthy man—has resulted from mixed farming on scientific principles in a land adapted by nature for an agriculturist's paradise. I need not say that Mr. Greenway is not among those who bleed their land. Indeed, I learned from his son that of late he has begun to return the manure from the cattle courts to the soil, an example which I am afraid few of his countrymen have followed.

During our stay at Crystal City our attention was about equally divided in studying the conditions of agriculture and the ways of the people. On the Sunday afternoon we drove in a direction opposite to that we had taken on the previous day to survey another stretch of country, making for the shores of a lake which I learned abounds in the Bony Pike. Mr. Greenway himself accompanied us, and we formed quite an imposing cavalcade. I was driven in the team of a young gentleman who is the agent of a bank in Crystal City, and whose favourite passion is the hunting of the Coyote, or Prairie Wolf. He is also reputedly the most fearless driver of the district, and with his team of piebald broncos he gave me the most exciting ride I had in Canada. I never learned his surname, as they do not trouble much with surnames there. He was known to all the party as "Harry." My friend the President of the Grain Exchange was familiarly addressed as "Charlie," and his brother the Senator as "Findlay." All of them were men—and I say it with sincere admiration—of simple and unsophisticated manners and speech, who showed us every kindness which it was in their power to show. I am afraid I unintentionally caused them all a good deal of disappointment by incidentally mentioning after we returned from our drive that I should have liked to see a Bony Pike. How easily would my wish have been gratified could they have thought that any visitor would like to see that voracious and destructive fish!

On the Monday morning we returned by train to Winnipeg accompanied by Mr. Young, from whose conversation I took notes all along the journey. No man was better able to discharge the office of tutor.

He and his brother some twenty years ago started farming in Manitoba, roughing it, and coming through the mill as pioneers. When they landed in the province they had between them money sufficient to erect a "shack," to buy a yoke of oxen, a plough and a harrow, six months' flour and "biltong," and $19 of capital to farm with. Mr. Charles Young is now at the head of his profession in Winnipeg, and his younger brother, who sits in the Dominion Senate, is an inspector in Manitoba and the Territories for one of the chartered banks of Canada. Either they, or their parents, came from Inverness-shire. When you meet successful men of this stamp in the colonies, you cannot but ask yourself the question, "What chance would these men have had to attain similar positions in the Old Country?"

Mr. Young seemed to be a perfect walking directory of the province. He told me of scores of men who had reached Manitoba penniless and were now substantial men. "One man," said he, "for whom I paid his first dinner, and gave him 75 cents to get medicine for his wife in 1889, is now worth $30,000 and owns 400 acres. Wherever you go I could show you cases like that. The only men who are no good here are 'Remittance Men.' Some of these men are actually paid to stay, and are looked upon in the outlying parts as quite a luxury when the remittance arrives. There are farmers of this class in the Far West who keep billiard-rooms, and for a short time while the remittance lasts have everything of the best. No one wants 'remittance men' here."

CHAPTER IX

BRANDON—THE "WHEAT CITY OF THE WEST"

ON the morning of Tuesday, August 26th, we again left Winnipeg, a reunited party, having scattered over the week-end in different directions the better to spy the land, on our main-line journey of 1,482 miles to Vancouver city. It was not, of course, our intention to perform the grand journey without a break. As we had stoppages of some duration at Brandon in Manitoba, Indian Head in Assiniboia, and Calgary, the chief city in Alberta, it took us a week to reach the Rocky Mountains. I have a souvenir of Brandon, a broad purple ribbon shaped like a marriage favour bearing the legend in gold letters, "Welcome to Brandon, the Wheat City of the West." So warm was the welcome prepared for us, and so many are the delightful memories of our visit to this flourishing town, that Brandon deserves most honourable mention in the annals of the British Editors' progress. For one thing, this was the only city where the ladies assumed the function of entertaining us.

Although Brandon has (or had, to be accurate) only a population of 5,380, it is a handsome town filled with churches, schools, banks, and other large buildings. It stands at an altitude of 1,150 feet on

an acclivity rising from the banks of the Assiniboine River, and the warm complexions of the ladies we met told of a health-giving climate and invigorating air. The feast which the ladies spread for us was laid in a hall attached to one of the churches, and what with the bloom on the cheeks of our fair servitors and the profusion of sweet-pea blossoms

FARM-HOUSE NEAR BRANDON.

upon the tables, none of us is likely soon to forget that charming summer's eve repast. The sweet pea attains extraordinary luxuriance in this country. All the gardens of Brandon were filled with it, and for a papilionaceous corolla I never saw blooms of such size and intensity of colouration. It is worthy of note that at Brandon, Indian Head, and Calgary

we saw the majority of the flowers common to our English gardens, flowering in great perfection, annuals in particular making a magnificent display. While some flowers appeared to thrive better than in England, I observed that pansies were rather undersized; and I saw no garden roses—but that might have been owing to oversight on my own part—until we reached Nanaimo in Vancouver Island, where in the garden of Mr. Robbins, the manager of the collieries, we strayed among thickets of rose-trees "full and bearing," as lovely and as fragrant as could be seen in the "gardens of Gul in her bloom." We were told that roses blow in British Columbia till past the winter solstice.

Whatever be the truth as to the cultured rose, there can be no doubt as to the wild rose of the prairie. This charming Canadian species first attracted my attention in the country around Brandon. We drove out of Brandon on the afternoon of the day of our arrival (Tuesday, August 26th) in a long cavalcade of two-horse teams, only the hoods of the rigs being sometimes visible above the ears of the standing corn. I drove in the rig of Mr. Hanbury, who has built up a large lumber-manufacturing business in Brandon. As we drove along my admiration was excited by the carmine inflorescence on a dwarf shrub, hardly a foot high, that carpeted the broad trails between the wheel ruts and the roots of the corn. At a distance I mistook the blooms for poppies. To satisfy my curiosity I got down from the rig, and Linnæus was thrown into no greater ecstasy when he first beheld the broom on Hampstead Heath than I was when I looked upon the circlet of deep-dyed large petals of the

Prairie Rose. Sometimes the tiny shrub is arrayed in numberless blooms down to the black earth. What surprises one accustomed to our arborescent Rosa Tominosa and Rosa Canina is the miniature stem and the immensity of the inflorescence of the Manitoban species. Its gay corolla is the lamp of the prairie, and here I may mention that it is a sort of "poor man's weather-glass" to the Western farmer. In selecting land he examines the buds of the Prairie Rose. The delicate crimson point where the petals protrude from the calyx is extremely sensitive to frost, and the experienced farmer can tell, if the tips are blighted, that the land has an exposure which renders it liable to the night frosts of early summer and late autumn. This is one of many curious little points to which Manitoban farmers pay particular heed.

Interviewing the Oldest Settler.

Were I to follow in detail the whole of our doings between Winnipeg and the Rocky Mountains the narrative would weary the reader, and there would inevitably be considerable repetition. Upon us it was incumbent to take long rides through the country, and interview as many farmers as possible. For the benefit of the reader the information I gathered must be summarised. As I looked upon our investigation of the agricultural possibilities of this part of the Dominion as of paramount importance, I wrote out my impressions upon the spot, taking notes, I might almost say, hourly; and before proceeding to generalisations I may, by way of specimen, transcribe the log jotted down while

driving with Mr. Hanbury over the farms between the Assiniboine River and the Blue Hills of Brandon.

"On driving through a 28-acre field of wheat we found two boys working a reaper who stated that the farmer was away having a day's berry-picking." (This I noted down as one of many observations to illustrate the point that Manitoban farmers take things more leisurely than is generally supposed.)

"Found Mr. Roddick, jun., leading one of two binders at work on his farm. Informed us that this was the fifteenth crop of wheat out of twenty consecutive crops since the land was broken in. The field consisted of 130 acres, and this was the best crop in twenty-three years. The yield would be from twenty to twenty-five bushels per acre, and the general average on the farm from twenty-five to thirty bushels.

"Drove up to the farm of the Rev. Mr. Roddick, father of the above, and one of the earliest settlers in the district. Found that a young couple were being married. Mr. Roddick, after ceremony, stated that the bridegroom had formerly been in his employment. He has now taken a farm, and opened a store in a rising place a few miles away.

"'I am told you were one of the first to farm in this district, Mr. Roddick?'

"'I came here in 1879, twenty-three years ago, from Pictou County, Nova Scotia, and took up this station at Brandon Hills. I was the first settler south of the Assiniboine. We drove by waggon 150 miles from St. Boniface, at that time the railway terminal point on the other side of Winnipeg. I drove with oxen and horses, bringing my whole

effects and family, wife and seven children. I farmed and remained in the ministry most of the time, and have seen the province expanding to what you see it now. All my seven children are spared, and I have twenty-four grandchildren, a dozen boys and a dozen girls. We farm among us 2,400 acres, and thresh from 30,000 to 35,000 bushels of wheat per year. This year we have the finest crops in memory. Some of our fields have yielded heavy crops for eighteen to twenty years, and take four-horse teams to reap.'

"'What decided your choice of station, Mr. Roddick?'

"'Well, we thought the place beautifully situated near the Brandon Hills and with the creek and wooded bluffs, which were all a mass of white blossom when we came here in spring.'

"'Is the climate healthy?'

"'We have had good health throughout, and not a single case of typhoid fever.'

"'You must have found it very solitary to begin with?'

"'Well, it was rather inconvenient for some things. When we came here at first you had to drive a hundred miles for a pound of tea.'

"'Your journey West must have been very toilsome?'

"'After fording the Assiniboine River we followed the Indian trail. We crossed the river in the waggon box, making a boat which we covered with rugs, and the teams swam through. In the journey up we sometimes made less than eight miles in a day. The children could see in the evening where we had tented the morning before. There were only seventy

miles of railway in the province when I came in. For some years the nearest store was at Portage la Prairie. We tented the first summer, and there you see our original log-house still standing. We paid $60 per 100 feet of flooring, which was brought up from Winnipeg by water. The price would be $25 now. The first year we raised no crop, but broke up about forty acres with a single breaking plough back set with stubble plough.' (I do not fully understand this expression, but stick by my note.) 'We drove one hundred miles to Portage (la Prairie) to get our first wheat ground into flour for our own consumption, bringing tinned meat back for the family to live upon. For the first eighteen months no money was brought in. After fording the Assiniboine River we wandered three weeks before pitching our tent, and I have not seen a place to exchange with this since then.'

"'You were veritable squatters?'

"'No Government survey had been made at that time. The survey was made two years later. We made a survey of our own, by the help of pocket compasses. We took a starting-point ten miles north from the old survey, and measured our quarter-section with a rope. We guessed the breadth of the Assiniboine, and were only a few yards wide. I just took up a homestead with preemption of 320 acres. Later on I bought land all round for my sons. In October of the fall following our arrival Mr. Johnstone from Ontario came in, taking up a station about a mile away to the north. For some years the only doctor was at Rapid City, twenty-four miles north of Brandon. The farmers here all came in poor, and all are now very well off. When I left

Nova Scotia there was not a farmer in all this district.' "

Mr. Roddick has certainly no reason to repent the resolve which led him to migrate from Nova Scotia to the Far West. Though a patriarch in the district, with all his sons, owning their own lands, farmers round about him, he is not an old man yet, and hard by the old log cabin now stands an elegant farm-house with a broad approach almost half a mile in length lined with trees. Skirting his estate is a creek running down a thickly wooded ravine, and beyond that the Blue Hills of Brandon, so named, as Mr. Roddick informed us, by Sir John Pelletier, who made a survey for the British Government, from the blue poplars that clothe the heights. Beautiful as the situation was when we saw it, I could quite imagine that in spring, as Mr. Roddick said, when all the trees are in blossom, the place is indeed a paradise.

Instructive as my interview with Mr. Roddick was, my readers will perceive that their patience would soon become exhausted were I to transcribe all my interviews with equal fulness. We spent two days at Brandon, visiting upon the second day the Government Experimental Farm and the Indian Industrial School, situated upon the north bank of the Assiniboine. Both these days were days of extreme heat, and this was the only time we felt the heat in Canada really oppressive. As in Crystal City, so in Brandon, we found that the manners of the people were delightfully kind and simple. We left Brandon on the evening of Wednesday, the 27th of August, and reached Indian Head in Assiniboia on the following morning. Here also we had a long

exploratory day's riding over the wheat-fields, and had a picnic on the banks of the Qu'Apelle Lake. Among the gentlemen who placed their time and their knowledge at our disposal were Mr. G. H. V. Bulyea, the Commissioner of Agriculture for the North-West Territories, and Professor Saunders, LL.D., the Director of the Dominion Experimental Farms. Indian Head is the seat of the Experimental Farm for the North-West. Here we spent an afternoon enjoying the hospitality of the Superintendent, Mr. Angus Mackay and Mrs. Mackay; but before speaking of the work of these invaluable institutions of the Federal Ministry of Agriculture I must devote a chapter to a generalised account of all I had seen and heard since leaving Winnipeg.

CHAPTER X

THE "GRANARY OF THE BRITISH EMPIRE"

THE black land of Manitoba begins about forty miles west of Winnipeg. Here the railway enters upon a boundless level expanse, and far as the eye can reach, as the train rolls along, you gaze during the season of harvest on miles upon miles of golden grain all ready for the reaper. For three hundred and sixty miles you may travel along this unbroken wheat-growing plain, where countless binders, with four-horse and three-horse teams, are mowing it down by swathes of 24 feet in breadth at a time. The binders rattle along almost at a canter, and even on the small farms—or quarter-sections—where the farmer cuts down all his own crop and has only one binder, he will reap from sixteen to twenty acres in a day of ten or twelve hours, with only one man following behind to lift and set the sheaves. Wheat-fields may be seen 400 acres in extent, and I was told that one may sometimes see points where four 400-acre fields meet, so that the beholder can look out upon an unbroken expanse of wheat 1,600 acres in extent, estimated to yield from 35 to 40 bushels to the acre.

Less than thirty years ago this country, covered at the present day by luxuriant fields of wheat, oats,

flax, and barley, was an unbroken prairie, over which roamed countless herds of buffalo. Even yet a large part of the settled land of Manitoba is prairie, and there are few farmers who have not prairie in reserve to add to their arable land. But the settled land is a mere fraction of the entire cultivable area, and it is computed that in ten years' time, even at the present ratio of increase, the grain production of Manitoba and the Western Territories would amount to the colossal aggregate of 600,000,000 bushels, equal to 75,000,000 quarters imperial measure.

The appended tables show how rapid the extension of cultivation has been, showing how, during the past two seasons, one banner crop has succeeded another, and how egregious a mistake is made in supposing wheat to be the only cereal raised in Manitoba:—

1891.

Product.	Total Yield. Bushels.	Acres in Crop.	Av. Yield to Acre.
Wheat	23,191,399	916,664	25·3
Oats	14,762,605	305,644	48·29
Barley	3,197,876	89,820	35·6
Flax	—	—	16·5
Rye	25,788	921	0·28
Peas	11,655	555	0·21
Total... ...	41,189,523		

1901.

Product.	Total Yield. Bushels.	Acres in Crop.	Av. Yield to Acre.
Wheat	50,502,085	2,011,835	25·1
Oats	27,796,588	689,951	40·3
Barley	6,636,155	191,009	24·2
Flax	266,420	20,978	12·7
Rye	62,261	2,707	23·0
Peas	16,349	879	18·6
Total... ...	85,179,858		

1902.

Product.	Total Yield. Bushels.	Acres in Crop.	Av. Yield to Acre.
Wheat	53,077,267	2,039,940	26·0
Oats	34,478,160	725,060	47·5
Barley	11,848,422	329,790	35·9
Flax	564,440	41,200	13·7
Rye	49,900	2,559	19·5
Peas	34,154	1,596	21·4
Total... ...	100,052,343		

The following table, which relates to the produce of the season 1902, further illustrates the extent to which dairy farming is coming into vogue in Manitoba:—

	Total Yield. Bushels.	Acres in Crop.	Average.
Potatoes ...	3,459,325	22,002	157
Roots	3,230,995	12,175	265

Butter.	Pounds.	Value.
Dairy	2,509,425	$374,560.99
Creamery	1,406,450	261,599.70
Total	3,915,875	$636,160.69
Cheese (Factory)... ...	1,093,653	111,443.24
Total Dairy Products		$747,603.93

The above statistics show that whereas in 1901 there were only 1,313,604 acres under crop in Manitoba, the area cropped in 1902 was 3,141,135 acres. According to the Government surveys, 25,000,000 acres are capable of cultivation. Doubtless all this is not of the same quality as that already taken up, but it must be borne in mind that quality of soil has not been the only consideration in determining the choice of stations, proximity to the railways being the main determining factor. What above all things folks in England cannot

comprehend is the ease with which prairie land can be laid under cultivation. Upon this question I interrogated many farmers, but one only needs to see the country and the sections of soil exposed along the railway to learn that it cannot be any arduous undertaking. The land surface, sometimes for miles together, is almost dead smooth, and covered with short grass and flowering plants seldom as long and rank as English meadow hay. The ordinary English conception of prairie vegetation is utterly erroneous. It would be quite correct to describe it as, for the most part, a rich natural pasture, variegated here and there with thickets of dwarf shrubs, and frequently turned to a carpet of gorgeous colouration by the profusion of wild flowers, which bloom in endless succession from the advent of summer to the fall of the year. The prairie is almost destitute of trees; no tangled bush confronts the settler, and in the black land of Manitoba stones and boulders are of extremely rare occurrence.

Real Nature of Prairie.

I travelled in "rigs" over probably hundreds of miles of prairie which presented all the appearance of good lea that might have been under cultivation for generations. To convert this into arable land is a comparatively simple matter. The new settler who is unable to afford a costly equipment sets to work with what is known as a "sulky" plough. This is a one-share implement drawn by a team of three horses, and to the ploughman the work is nothing like so heavy as ploughing stiff clay

soil in England. The more substantial farmer uses a "gang" plough, a two- or three-share implement drawn by four, six, or eight horses, upon which the operator sits as if he were leading a reaping machine. Sometimes half a dozen "gang" ploughs are hitched to a traction engine, sixteen or more furrows are turned at one time, and a field

LUXURIANT NATURAL PRAIRIE VEGETATION.

of twenty to thirty acres may be broken in a single day. In Western farming nothing is done by manual labour that can be done by horse muscle and steel.

As a rule the furrow in breaking prairie is shallow and broad; it hardly amounts to more than overturning the turf and exposing the black pulverulent loam to the sun. The operation is

generally accomplished during the summer, when other farm work is slack, the land being then allowed to lie fallow in readiness for the spring sowing. In the following summer it yields a bumper crop of wheat, forty bushels to the acre being the common expectation if the soil is of rich composition. No long and painful toil in reclaiming his quarter-section—160 acres, or quarter of a square mile—confronts the settler in Manitoba. The farmers of this province hardly think more of breaking prairie than of ploughing down "lea land," as they call third year's grass in Scotland. Prairie land may be broken in at an outside cost of 2 dollars—8s. 4d.—per acre. Another dollar and a half will suffice to prepare it for seeding, 75 cents will purchase the seed, other 75 cents will cover the cost of harvesting, and a further outlay of 1 dollar 20 cents for threshing and delivering to the nearest elevator will cover the costs per acre of the first crop. An outlay, therefore, of 6 dollars, or say 24s., an acre is all that is required to raise wheat from a virgin soil, which for ten or even more consecutive seasons has been known to yield crops of practically undiminished weight and quality —Manitoba's No. 1 Hard, than which there is no finer milling wheat in the world.

Copious as the vocabulary of our language is, it contains no diction adequate to communicate the impression produced by days spent in exploring the Imperial Granary. Over a vast horizon radiant with sunlight undimmed by vapoury absorption, you gaze upon oceans of yellow grain and the brown bent of the prairie until the vision is entranced, and the senses are well-nigh over-

powered by Nature's lavish exuberance. It is true that the first impression of Manitoban scenery is one of monotony, and the new-comer complains of lack of variety to arrest attention. It is, however, maintained that you soon learn to love it; and there can be no question that all the Canadians of the West adore the land of their adoption, and few there are who do not come to stay. For my own part I must confess susceptibility to its charms.

The figures given in earlier portions of my narrative might not convey to British agriculturists a conception of great productivity in the wheat yield of Manitoba. The highest figure I have quoted was 40 bushels per acre, the yield expected from newly broken prairie, a yield which in England or Scotland would not be regarded as phenomenal. The highest figure I ever heard mentioned was 65 bushels per acre, but such yields are more than double the average for the entire province. For the decade 1891–1900 the average was no higher than 17·41 bushels, and a fair average for the good land might be placed, according to the best authorities, at about 20 bushels per acre. The notion, likewise, that the wheat of the West stands six feet high is an entire misconception. Although very tall grain may occasionally be seen, the average length of Manitoban wheat straw is considerably under that of the English cereal, the ear is short and compact, and the berry is small. As a matter of fact, the Manitoban farmer aims at producing as little straw as possible. In his short summer a rank growth would retard the ripening of the crop, and amount to sheer waste,

as he has no use for the straw, but is, in fact, compelled to burn it to get rid of it. The crop is thinly sown, for in a country like this space is little object; and from what is called the stubble crop a high yield is not expected. A fifteen-bushel crop selling at 55 cents per bushel is quite sufficient to pay—everything in excess is found money; and what every farmer really strives to obtain is that particular quality of grain referred to above—No. 1 Hard.

It is to the fact that no other soil and no other clime can produce this grade of wheat that Manitoba owes its pre-eminence. No. 1 Hard is a small amber-coloured berry, containing 12 per cent. gluten, and capable of fixing half its own weight of water in chemical combination when baked into bread. Year in and year out, without using fertilising agents or farmyard manure, by agricultural methods which the farmers of Lincolnshire, Forfarshire, or the Lothians would smile at, or denounce as slipshod, this splendid grain is capable of being grown over an area equal in extent to France; and upon the almost boundless extent and marvellous fertility of these plains Canada bases its proud claim to recognition by the people of England as the Granary of the Empire.

A Land of Optimism.

Manitoba is the land of optimism. In the Golden West despondency is unknown. Every man you meet is bubbling over with enthusiasm and confident hope. The entire population are addicted to magnifying themselves, their magnificent country,

their wheat-fields, their rivers, and their charming climate. No man doubts the glorious future of the country, and no man despairs of his own fortune. Millions of bushels of wheat, profits of untold thousands of dollars, form the staple of conversation. At every turn you knock against men who a few years ago came West with the invariable capital of ten dollars, or without a cent, merely another way of expressing the same degree of impecuniosity—who now own huge lumps of land and are the reputed possessors of dollar tens of thousands. The visitor cannot eulogise the country and its people overmuch; and however high his personal estimate may in all sincerity be placed, he cannot but be amused at the ebullient optimism of this lion-hearted generation.

The optimism of the land is indeed contagious. In cities like Winnipeg, Portage la Prairie, Brandon, and all along the C.P.R. line, it is the natural product of prosperity, the outcome of triumphs achieved and toil rewarded; but it is partly indigenous to the soil and attributable to the climate. The Manitoban plain stands at an average altitude of 1,300 feet above the level of the sea, the air contains an unusually high percentage of ozone, the skies for the greater part of the year are cloudless, and the atmosphere is singularly transparent. The high summer temperature—90 degrees in the shade was frequently registered during our stay—is tempered with a cool breeze, balmy with the fragrance of the artemisia and a thousand other prairie flowers. The whole land is bathed in sunlight, and in the older, settled districts, as far as the eye can reach—sometimes for fifteen miles—seas of

golden grain wave and glisten as their milliards of spears shake in amber-tinted undulations under the passing breeze.

No Manitoban, however, admits that the delicious summer climate surpasses the invigorating winter. The winter, you are constantly being informed, is the time to visit Manitoba. In summer and the

CHARACTERISTIC MANITOBAN SCENERY.

fall every one is busy—and that generally means making money—the enjoyment of life is reserved for the season when a snowy mantle envelops the land upon which the sun shines in undiminished splendour. As soon as harvest is over shooting begins, bringing conviviality in its train. The country abounds with game, the Prairie Chicken, wild duck, and geese; and those who prefer the hounds devote

themselves to the more exciting chase of the Coyote, or Prairie Wolf. Prairie Chicken shooting commences on September 15th, and huge bags of eighty or a hundred are nothing uncommon. Wild duck were already arriving in August in large numbers from more northern latitudes, and flights of them might be seen rising from the reedy margins of the thousand lakes, great and small, which fleck the face of the country. The wolf of this region, which is smaller than the European species, but still savage enough to offer fight when attacked, though never known itself to attack man, is hunted down with powerful hounds, a pack of which forms part of the establishment of the spirited Manitoban gentleman. It is usual to follow the hounds on horseback; but the character of the country is illustrated by the practice in wolf-hunting of riding a "rig" drawn by a pair of swift and hardy broncos, which tear at a break-neck pace over field and fallow, brake and prairie, through creek, sleugh, and coulee, or prairie ravine, the ponies understanding and enjoying the sport.

Canada is likewise, as all the world knows, or ought to know, the fisher's paradise. Every river abounds with trout, every lake with white fish or the Bony Pike; and all the year round excellent sport, pursued by methods adapted to the varying seasons, rewards the angler's toil. To all this picture of an exhilarating winter life might be added curling, which is universal, and many other seasonable pastimes. All this I mention in order to correct the preposterous misconception so prevalent in England that the Canadian West is a country like Greenland. Manitobans declare that it is as

easy to go about out of doors without an overcoat in the dead of winter in their country as it is in England even when the thermometer registers many degrees below zero. This they attribute to the dryness and stillness of the air. Similar remarks obtain with regard to the Provinces, or Territories, of Assiniboia, Saskatchewan, and Alberta. In a pamphlet written by Mr. C. M. Peterson, the Deputy Commissioner of Agriculture at Regina, it is stated: "Low temperatures in winter in this dry climate cause no inconvenience unless accompanied by high winds, which is not often the case. The immigrant may prove this conclusively by watching the rosy-faced school children rolling each other in the dry, powdery snow on a fine winter day when the thermometer perhaps stands several degrees below zero." I listened to similar testimony from persons who could not, like a Government official, be suspected of drawing a rosy picture with the object of stimulating the ardour of intending immigrants.

Extent of Cultivable Land.

On reaching Indian Head, 314 miles west of Winnipeg, and at a considerably higher altitude than Brandon, we were surprised to find that the black land was still everywhere in evidence. Indeed, we were told that the richest areas of prairie loam are in this vicinity. We were now in the so-called Territories, where thousands of emigrants from all quarters of Europe are founding homes. In Assiniboia are some of the oldest cultivated districts, and here also are those vast unoccupied tracts to which the Dominion Government is inviting the weary

and heavy-laden from every oppressed State of the Old World to come and get farms for the asking. It was in the district around Indian Head that in the land boom of the early eighties immense areas were bought up by land companies and speculators; and it is here that the style of farming peculiar to the North-West was first instituted by Mr. Angus Mackay, who is now Superintendent of the Dominion Government's experimental farm for the Territories.

The celebrated Bell Farm, originally 80,000 acres in extent, adjoins the present station of the C.P.R. This estate, on the interminable wheat-fields of which as many as fifty binders have been seen at work, has now been broken up, for in the Far West, as in every other quarter of the globe, experience has shown the impracticability of farming upon so princely a scale. While the best land in Manitoba last summer was only fetching 15 dollars per acre, the highest figure yet attained, lands had been disposed of in the vicinity of Indian Head for 20 dollars, and even for 30 dollars. These prices do not, of course, represent prairie value; but all over this district land values have doubled within the past three years; and large areas of unbroken land in Assiniboia have been bought up by speculators which cannot now be purchased for less than eight, nine, or ten dollars per acre.

All along a broad belt of territory contiguous to the Foot-hills of the Rocky Mountains, the rigour of winter is mitigated by the warm Chinook winds, which, rising from the Pacific Ocean, descend from the Rocky Mountains as genial breezes, warm enough to melt the snow at the winter solstice. In summer, on the other hand, the Chinook assumes the cha-

racter of a cool, moisture-laden wind, and we have the apparent climatic abnormality of having a more temperate climate in North-Western Alberta than in the more southerly situated Manitoba.

Eastern Assiniboia is beyond the range of the Chinook winds. The climate is analogous to that of Manitoba, but, being situated in the very heart of the continental land mass, Assiniboia has a slightly lessened amount of precipitation. While the Manitoban farmers are gradually adopting mixed farming and the rotation of crops, the Assiniboian agriculturist devotes his whole attention to wheat. The system of cropping is unique. No fertilisers are used—that goes without saying. The farmer invariably divides his land into four parts. One is pasture or prairie; another portion lies fallow through the summer; a third (which the previous season had been fallow) grows the main wheat crop; and the fourth (which the previous season had grown the main crop) grows what is known as the stubble. This is the typical farming system of the North-West.

Agriculturists will at once perceive that the dominant characteristic of this system is the practice of summer-fallowing. As mentioned above, this practice, which may conserve the fertility of the black loam for an indefinite period of time, was first adopted by a scientific agriculturist, Mr. Angus Mackay. Not only does summer-fallowing prevent exhaustion of the plant food in the soil, but it enables the farmer to clean and till his land during his short summer in readiness for the pulverising agency of the winter frost. Winter invariably departs suddenly about the beginning

or middle of March. No sooner has the snow disappeared than the seed is sown in its admirably prepared bed. The seed being put in the moment the black earth is uncovered, a rapid vegetation ensues, and the plant receives a constant supply of moisture all through the summer from the reservoir of melting ice beneath. With never-failing regularity showers fall in June, and during all the summer months the long day and the sun's potent rays promote rapid growth and early maturity.

The Dominion Government still retains in the Territories many millions of acres of splendid land, which settlers willing to rough it for a year or two may acquire in holdings of 160 acres each, merely by fixing their abodes upon them and bringing 15 acres per annum under cultivation for three consecutive years.

As showing the field that still lies open for settlement it may be mentioned that while in Manitoba last year there were upwards of 2,000,000 acres under wheat, in the combined Territories, quadruple the area of Manitoba, the whole area under wheat only totalled 585,697 acres. While the wheat yield of Manitoba exceeded 53,000,000 bushels, that for the three Territories was no more than 14,649,500 bushels. The Territories comprise the great unorganised provinces of Assiniboia, Saskatchewan, and Alberta, an area almost equal to Central Europe. While Manitoba has an area of 73,956 square miles, the three Territories have a combined extent of 304,340 square miles, and lying to the north of them, though still far south of the Arctic Seas, is the vast and only partially explored domain of Athabasca, a large part of which is declared to be

capable of habitation and cultivation. Athabasca has an area of 251,300 square miles.

These dimensions, however, convey but a vague idea of agricultural value, and would not impress those who conceive the greater part of Canada to consist of barren lands under the Frigid Zone. I shall presently show how far to the south of that zone the fertile provinces really lie, and what are

PRAIRIE TOWN, REGINA, ASSINIBOIA.

their climatic conditions. The importance of the subject, not alone to Canada but to the British Empire at large, must be my excuse for entering into the matter at some detail.

In the end of last year a statement upon the possibilities of the Great West was prepared by Mr. McKellar, the Deputy Minister of Agriculture for Manitoba. Mr. McKellar places the total area of Manitoba, Assiniboia, Saskatchewan and Alberta at

230,823,000 acres, and, deducting forests, mountains, swamps, arid districts and road allowances, he estimates the amount of desirable farm land as follows:—

	Acres.
Manitoba	23,000,000
Assiniboia	19,000,000
Saskatchewan	17,000,000
Alberta	16,000,000
Total	75,000,000

Of these 75,000,000 acres it is estimated that 20,000,000 in Manitoba and 10,000,000 in the Territories have already passed out of the hands of the Dominion Government and the railway companies as homesteads or by sale. This leaves 45,000,000 acres of farming lands yet to be disposed of. Mr. McKellar points out that the possibilities of production have been barely touched. Of the 23,000,000 acres of farm lands in Manitoba, for instance, only 3,189,015 acres were under crop last year, and, say, 500,000 acres summer-fallowed, making in all 3,689,015 acres broken. "Within the next ten years we may expect at least 10,000,000 acres to be under cultivation," says Mr. McKellar. "Computing the increased acreage in ten years by last year's acreage in crop, Manitoba will then be producing in one year 168,340,280 bushels of wheat, 92,655,290 bushels of oats, 21,787,180 bushels of barley, and in all grains 283,932,860 bushels."

Assuming a similar increase in acreage in the Territories, and making allowance for varying local conditions, the Minister computes that the crop in Manitoba and the Territories ten years from now

would be 350,000,000 bushels of wheat, 200,000,000 bushels of oats, and 50,000,000 bushels of barley. This estimate is on a basis which will mean the cropping of only a little over 20,000,000 of the 75,000,000 acres, or 43 acres out of every 160, so that when the full possibilities of that vast area are achieved, and the crop area will be more like three times that number of acres, the grain production would be over 1,000,000,000 bushels of wheat, 600,000,000 bushels of oats, and 150,000,000 bushels of barley. That would still leave 14,000,000 of the 75,000,000 acres unbroken for pasture or hay, and takes no account of the remaining areas, at least 100,000,000 acres in extent, of swamp land, forest, arid belts, &c., much of which will be, as it at present is, found useful for grazing purposes.

In the event of Mr. McKellar's estimate of the grain production ten years hence being realised, there "would be available for export 300,000,000 bushels of wheat, and 100,000,000 bushels of oats, which would require for its transport a train as long as from Vancouver to Montreal."

As showing the full significance of these figures, I may mention the wheat yields of the chief producing countries in 1901:—United States, 720,000,000 bushels; Russia, 336,000,000 bushels; France, 304,000,000 bushels; Hungary, 138,000,000 bushels; Argentine Republic, 52,000,000 bushels; India, 240,000,000 bushels; Germany, 108,000,000 bushels; and Italy, 128,000,000 bushels. Of these only Russia, the United States, Hungary, Argentina, and India have to be reckoned with as exporting countries. In 1901 the world's production of wheat aggregated 2,764,000,000 bushels; by 1913, if Mr. McKellar is

right, the Canadian West will raise it to close upon 4,000,000,000 bushels!

Even if, ignoring high ministerial and expert authority, we make ample allowance for the full brush with which this picture of the world's future granary is painted, we are impelled to contemplate the political and economic consequences of the opening up of a fertile sub-continent within the bounds of the British Empire. Nor must it be forgotten that Mr. McKellar confines his prophetic survey to Manitoba and the three Territories. The northern border of these is only at the 55th parallel, and the northern limit of profitable cultivation has not yet been ascertained. In the valley of the Peace River, as far north as the 58th parallel of latitude, it has been found possible to grow No. 1 Northern Wheat, the next best grade to Manitoban No. 1 Hard, and as the climate is found to ameliorate, or seems to ameliorate, as culture is pushed farther north, even this may not be the Ultima Thule for the rearing of cereals.

PEACE RIVER, BELOW THE CAÑON.

CHAPTER XI

CLIMATE AND FLORA

THERE could be no greater mistake than to imagine that a heavy precipitation of winter snow, covering the whole face of the continent in a mantle several feet deep, is the greatest drawback to dwelling in Western Canada. A more serious climatic defect is the somewhat deficient precipitation of rain in summer. In some parts of Western Assiniboia and Alberta, the deficiency is so great as to render cultivation impossible without irrigation, but the mighty rivers which descend from the Rocky Mountains in perennial torrents from the melting of snow and ice render irrigation comparatively easy and inexpensive, and there can be no doubt that vast tracts which at present are practically valueless will in the course of time be profitably cultivated. As a matter of fact, snow seldom falls to more than a few inches in depth on the prairies, and the following table will show that the snowfall diminishes in quantity from the Atlantic provinces of Canada towards the Rocky Mountains. I select only the last five years, which for my purpose are sufficiently typical of the records which have been taken since the year 1874 :—

	Quebec.	Nova Scotia.	Ontario.	Manitoba.	N.W.T.
1897 ...	91·4	86·5	73·0	59·1	53·2
1898 ...	105·3	89·0	89·8	53·8	52·4
1899 ...	93·9	81·3	60·5	44·4	56·9
1900 ...	128·3	80·5	81·4	38·1	50·2
1901 ...	117·0	93·0	76·5	40·3	58·9

It will be seen that in the year 1900, while in the Province of Quebec, which, however, it should be explained, extends into Labrador, there was a snowfall of 128 inches, in Manitoba the snowfall was no more than 38 inches, and in the North-West Territories 50 inches. On the other hand, while the snowfall is much less, the average winter temperature of the Great West is much lower. The average mean temperatures are as follows:—Nova Scotia, summer 65°·2 Fahrenheit, and winter 25°·0; Quebec, 58°·3 in summer, and 15°·0 in winter; Ontario, 63°·0 in summer, and 19°·8 in winter; Manitoba, 60°·1 in summer, and 0°·8 in winter. But in Western Assiniboia and Southern Alberta the winter climate undergoes a great change. Winter here is a season of bright, cloudless days, infrequent and scanty snowfalls, and frequent and prolonged breaks of warm weather heralded by the Chinook wind. In these longitudes we already experience the ameliorating influence of the Japan Current, which in British Columbia plays the part of the Gulf Stream in North-Western Europe. In British Columbia the mean winter temperature is as high as 32°·4 F. The genial influence of the Pacific Seas is conveyed over a large part of the Western Continent by the balmy Chinook winds, so-called because they blow from the region formerly inhabited by the Chinook Indians on the banks of the lower Columbia River.

If in Manitoba and Assiniboia the winter tempera-

tures are extremely low, the summer temperature is occasionally exceedingly high. The thermometer sometimes rises during the day to 106° in the shade, and temperatures of 100° in the shade are by no means uncommon. This, of course, is all in the farmer's favour by promoting the rapid ripening of the crops, and the chief anxiety is for a sufficiency of moisture. I append the following table giving the total annual rainfall for every second year since 1891 at a number of representative stations in the Territories :—

Station.	1891.	1893.	1895.	1897.	1899.	1900.	Average of Ten Years.
Regina ...	12·39	4·88	9·29	5·97	14·22	10·95	9·77
Medicine Hat	9·70	9·08	11·39	11·77	21·17	22·05	13·07
Edmonton ...	15·63	12·34	10·77	12·16	20·89	27·81	14·37
Swift Current	17·68	8·68	9·50	12·23	19·40	13·94	12·51
Qu'Appelle...	15·31	11·25	11·96	8·76	19·27	16·52	13·82
Calgary ...	8·93	6·88	10·76	15·69	27·90	18·57	13·37
Prince Albert	8·77	8·45	8·88	11·04	29·88	22·40	13·10
Battleford ...	7·41	9·24	10·56	14·09	18·96	20·41	12·38

These figures show that the normal rainfall is rather less than that of Montana, but the most interesting feature of the full records is that of late years there would seem to be a distinct tendency toward increased precipitation in the Territories. The period, however, over which reliable records have been kept is not sufficient to warrant a safe conclusion. As it is, the rainfall has sufficed for several years past to nourish bumper crops.

As to the soil, he would be a fastidious agriculturist who was not satisfied with its composition and capabilities. What is that black land which is capable of supplying such an apparently inexhaustible supply of plant food? It resembles a rich

but dusty garden mould, which, owing doubtless in part to frost action in winter, seems never to aggregate in clods. So pulverulent is it that the winds raise dust-clouds from the fallow land. So light and porous is it that the disc-plough glides smoothly through it, throwing up a furrow a foot and a half broad with an ease that suggests the ploughing of blown sand. Clay, sand, and nitrogenous material, resembling detritus of peat, seem to be intimately combined in about equal parts; but in order to be scientific I shall borrow an analysis of surface soils from the North-West Territories by Professor Shutt, chief of the Division of Chemistry of the Federal Department of Agriculture:—

	Potash.	Phosphoric Acid.	Nitrogen.	Lime.
E. Assiniboia: Yorkton ...	·49	·21	·501	·06
E. Assiniboia: Saltcoats ...	·34	·21	·571	2·09
E. Assiniboia: Moosomin .	·36	·11	·479	·95
W. Assiniboia: Tilley Tp ...	·27	·18	·398	·37
North Alberta: Vermillion Hills	·17	·17	·354	·50
South Alberta: Calgary ...	·44	·17	·447	·92

These analyses, it must be noted, do not represent the rich black loam of the land about Indian Head, but soils of more average composition. The whole formation resembles the bed of an ancient morass of sparse vegetation and infinite extent. Such probably was the origin of the black land; while, at a still earlier period, geologically speaking, the whole area formed the bottom of an immense shallow lake. Of this there is abundant geological evidence, and geologists have given the name of Lake Agassiz to the greatest land-locked sea of prehistoric times which their science has

restored. This lake, like the Quaternary Lake of the Vale of York, was formed by the waters being dammed up by an ice barrier. In the case of Canada the barrier extended over the whole breadth of the northern continent, and the overflow was to the south down the Missouri Valley to the Gulf of Mexico. The black land of Assiniboia and Manitoba, which overlies till and boulder clay, has an average thickness of several inches, and is sometimes even several feet in depth. Geological structure, winter frost, and summer sunshine combine to make this boundless plain—or plateau—the paradise of the agriculturist, for cereals and root crops may be reared here with equal ease and luxuriance. Among the very latest of agricultural developments has been the successful cultivation of sugar beet, grown under irrigation in the Lethbridge district of Southern Alberta.

Fruit Cultivation.

It might be asserted as a general proposition that anything which the sun heat of a single summer can bring to maturity may be reared in Manitoba and the Territories. The extreme rigor of winter is inimical to the cultivation of fruit. At the Immigration Hall in Winnipeg I was shown some large apples which had been grown in Manitoba, and Mr. D. A. Stewart, M.P., an agriculturist of that province, informed me that he had succeeded in growing apples upon his farm at Pilot Mound, a station far to the south, by the simple expedient of bandaging the stems during winter in order to prevent the frost freezing the cell-sap in early spring.

The great danger arises from frost returning after the sap has begun to ascend the stem, when, if the sap gets frozen to the core, the tissues get ruptured and destroyed, and the trunk may burst like a water pipe. It is imperative in estimating the agricultural possibilities of these regions to remember that the low winter temperatures will always place limitations to the successful prosecution of branches of cultivation outside the staple products of the farm. These are with few exceptions reared and garnered in one season, but the following minima of winter temperatures registered at Regina and Medicine Hat, points in Eastern and Western Assiniboia, will indicate that the Territories have a climate which unfits them for the habitat of the more delicate perennial temperate species:—

Station.	Year.	Jan.	Feb.	Mar.	April.	Nov.	Dec.
Regina	... 1896	38·0	20·0	23·0	10·0	46·5	35·0
,,	... 1897	35·0	34·5	—	14·0	32·0	33·0
,,	... 1898	23·5	28·5	28·0	7·0	25·0	28·0
,,	... 1899	34·0	46·0	30·0	20·0	—	—
,,	... 1900	--	—	23·0	12·0	32·5	20·0
Medicine Hat	... 1896	35·0	19·6	25·0	8·0	36·0	23·0
,,	... 1897	50·0	22·5	—	20·0	26·0	31·0
,,	... 1898	16·0	25·0	20·0	10·0	11·0	23·0
,,	... 1899	26·0	45·0	27·0	16·0	—	25·0
,,	... 1900	18·0	34·9	16·1	26·8	31·5	9·0

It must be understood that these are minimum readings, recorded in all probability only on one day or night of the month to which they refer. The mean temperature is very much higher; I find, in fact, that the meteorological records kept at twenty-seven stations in the Territories (Assiniboia, Saskatchewan, and Alberta) during the winter

of 1901 show that the mean for January, the coldest month of the year, was under zero only at eight points, while in some other places it was not much below the freezing point. At some places maxima as high as 59° were registered. A country with a climate of this nature, subject to extremes ranging from 106°, as at Medicine Hat in June, 1900, to 32° below zero in the succeeding January, is obviously best adapted to its own highly specialised native flora. To describe this flora as sub-arctic would certainly be inaccurate, but it has characteristics of a climate much more rigorous than that of the temperate latitudes of Europe. It is, however, extremely rich in species, and if these native species are capable of crossing with the ordinary cultivated varieties, the hardier they are the better. It is in this direction that the botanists at the Experimental Farms at Brandon and Indian Head are now labouring. In the nurseries at the latter place Professor Saunders showed me dozens of new varieties which have been obtained by crossing Manitoban species of Pyrus and Prunus with varieties of apple, pear, plum, and cherry from Russia, Siberia, and other distant countries. Both the genera of Pyrus and Prunus, to which the majority of our ordinary arboreal fruits belong, are well represented in the Far West, and the results which have attended both cross-fertilization and grafting are extremely encouraging. Although I did not in any case see upon the new strains fruits which could be called other than "crabs"—or rather what in the North of Scotland are called "oslins"—still the increase in size as compared with the tiny pomes on the wild species was astonishing,

and the clustering abundance of the crop, almost without exception, was prodigious. On many trees the twigs were so thickly studded with little red and golden pomes that the branches seemed destitute of leaves. Thus we may believe that in course of time Manitoba and the Territories will have garden varieties of apple, pear, cherry, and other fruits, evolved from the native species, and like them capable of withstanding the utmost rigour of the winter climate.

Work of the Experimental Farms.

It would be difficult to laud too highly the work that is being done at the Government Experimental Farms in all its branches. There are in all five of these invaluable institutions at which scientific horticulture and agriculture are studied for the benefit of the farmers in the different climates of Canada. Among the matters practically investigated at each of these farms, with special reference to the conditions prevailing in the province which it serves, are the best methods of maintaining the fertility of the land, the most useful measures to adopt in preparing the land for crops, how and when seed should be sown, and what are the varieties which have been experimentally shown to be best and most productive. Observation has also been directed to the care of cattle, sheep, swine, and poultry, and the most profitable methods to adopt in the feeding and breeding of different classes of stock for the production of meat and dairy products. After visiting Great Britain and France to note the progress being made in scientific agriculture in the Old World, Dr.

Saunders could declare that "Canadian farmers are well to the front in almost everything, and there is no other country where there are so many useful measures in operation designed to assist the farmer in overcoming the difficulties he has to contend with, and to aid him in his endeavours to acquire a better practical knowledge of the important principles

EXPERIMENTAL FARM: INDIAN HEAD IN THE DISTANCE.

which underlie his occupation." Dr. Saunders added, what I am afraid could not be said of the farmers of some countries: "It is gratifying to know that the farmers of Canada are eager for information and always ready to take advantage promptly of every opportunity of improving their condition."

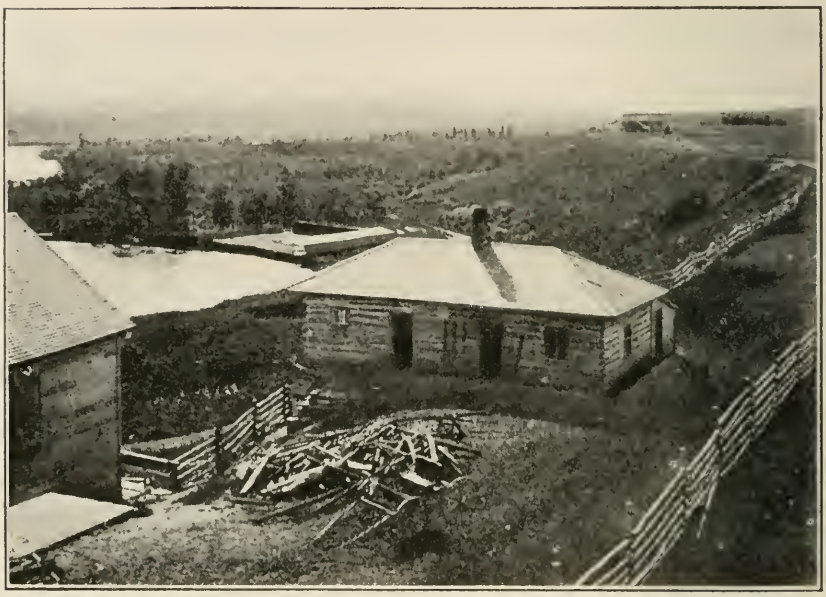
At the experimental farms at Brandon and Indian

Head I was particularly delighted with the extent of the nurseries devoted to the growing of useful timber and ornamental trees adapted to the climate of the provinces. Not only is the research work proper to an arboretum carried on, but large plantations are reared from the seed of such varieties as are specially suitable for shelter-beds or the beautifying of farm-houses. There are millions of seedling trees for gratis distribution to farmers who have the sense or taste to desire to have their homes surrounded with some leafy shade and greenery to break the treeless sameness of the landscape. Some idea of the work accomplished may be gleaned from the fact that at the Central Experimental Farm at Ottawa no fewer than 3,071 species and varieties were under test in the year 1899. The species were representative of all the Orders to which the trees of temperate climates belong, and it certainly says much for the Canadian climate that out of the 3,071 species tested 1,434 should have been found absolutely hardy and 361 half-hardy, while only 232 were tender and 307 winter-killed. Of 737 it was not possible to give an opinion, as they had not been planted long enough. It may be well to remember, however, that Ottawa is on the same parallel of latitude as Venice, and is five degrees further south than Winnipeg and Regina. People in England are so much given to thinking of Canada as a land of snows and arctic cold that to some it may be a surprise to learn that Toronto lies as far to the south as Marseilles and Florence, while the three Territories of the Great West all lie further to the south than Scotland and Denmark. Saskatchewan lies in about the same latitude as England. For

countless ages the whole of that vast region west of the Great Lakes has been scorched by ardent solar radiation and devastating prairie fires in summer, while the winter cold was sufficient to kill off to the snow-line any invading plant species from the warmer lands to the South. The result has been the evolution of a highly specialised flora which man may turn to account not only in rearing foodstuffs and cattle fodder, but in beautifying his abodes with new and characteristic forms of rural loveliness and refinement. The Government Experimental Farms have made a magnificent start in this laudable, if not indispensable, work.

The most disappointing feature of Western farming life at present is that a large number, probably the majority, of the farmers are not adopting that method of life which commends itself to right-thinking men. Wheat and dollars engross their intellect and energy. Among the English-speaking farmers little effort has been made to make the farms the homes of happy families. Seldom has any attempt been made to beautify the homesteads, to lay out gardens, and plant trees and shrubberies. The German settlers, who deserve the credit of making the farms their homes from the very outset, have shown how readily, with a little labour and moderate outlay, this can be done. A poet visiting Assiniboia would declare that the English-speaking farmer has destroyed the beauteous prairie in order to convert it into a wheat-growing wilderness. Through sheer avarice most of the farm buildings are bare wooden tenements and barns, often mere shanties and log-cabins. A large proportion of the men are bachelors, and have no desire to improve

their way of life. An obvious method of fostering population would be to induce every unmarried man to visit the Old Country to take a wife. The beautifying and refining influence of woman would soon transform the dreary homesteads, and the presence of children would introduce mirth and gladness into a land which lacks nothing so much as family life.



A SETTLER'S FIRST HOME.

We are, of course, speaking in a general sense. Innumerable charming residences may be found, and our remarks do not refer to the towns or to the foreign settlements. Nearly all the foreign settlers bring their womankind with them, and plant homes in the true sense of the word in the land of their adoption.

It is generally alleged on behalf of the bachelor

farmers that they are men who have come through the hardships and privations of the pioneer, and have contracted unsocial habits which cannot be laid aside in after-life. Be that as it may, settlers of this description are not realising to the full the enlightened policy of the Dominion Government, which is to make the fertile West the home of an industrious and cultured agrarian population, a peasantry attached to the soil like the French-Canadians of the Eastern Provinces, a sturdy land-bred race, the bulwark of Canada and of the British Empire in the New World Continent. There is too much tendency at present to buy land, farm it for a few years, tear a fortune out of it, and then to sell out at a profit. This has led to gambling in land. Every man from Winnipeg to Calgary in the Foot Hills, whatever his profession—clergyman, solicitor, physician, schoolmaster, journalist, &c.—buys and sells land and dabbles in farming. If this goes on long enough, evils as bad as those of landlordism may supervene—but this is certainly a very distant danger for the present.

CHAPTER XII

PEOPLING THE PRAIRIE

LATE as the season for emigration was at the period of our visit, every West-bound passenger train was bringing to the Far Western land of promise its contingent of intending homesteaders—single young men and heads of families with all their nearest and dearest, the majority hailing from the Baltic countries, Russia and the northern provinces of Austria, and a smaller number from England, Scotland, and the Emerald Isle. All along the westward march of the Aryan peoples, across two continents and the Atlantic Ocean, from the Urals to the Rockies, they may be seen, old men and infants, youths and maidens in the prime of life, journeying with song and with tears to their new homes in the Canadian Prairie, where there is wealth for honest labour, and where neither Statecraft, nor priestcraft, nor overlords, nor ruling castes grind out of the peasant the fruits of his bitter toil. In the steerage of the Atlantic-liner I listened to women of Finland and of Galicia singing the plaintive melodies of their native lands, and as the lump gathered in my throat, the prayer and the faith arose that these exiles would in a few years be happy

Canadians, contented and prosperous under the freedom of the British flag.

In the spring and summer months of 1902 emigration from Europe to Canada underwent an increase of 87 per cent. as compared with the corresponding months of 1901, and in addition to this there was an immensely augmented influx of farmers and stock-raisers from across the United States boundary. About one-third of the European immigrants were settled in Manitoba, and the remainder in Assiniboia, Saskatchewan, and Alberta.

Emigration from the British Islands to Canada had been at a low ebb for many years, but the splendid Manitoban harvests of the past three seasons gave it a fillip all round, while the work of obtaining settlers among the peasant populations of the Old World was never before so thoroughly organised as it has been by Mr. W. T. R. Preston, the Commissioner of Immigration for Europe, upon whom has devolved the task of carrying out a policy first inaugurated by the Hon. Clifford Sifton, Minister of the Interior in the Laurier Administration. Before the present Liberal ministry came into power, the work of systematically promulgating the advantages offered by Canada as a field for emigration was either neglected or left to the shipping companies engaged in the St. Lawrence trade. The great change effected within the past few years is mainly the result of systematic organisation. In 1896, when Sir Wilfrid Laurier took over the seals of office, a new spirit was infused into all departments of the public service of the Dominion, and the executive methods of the Immigration Department were radically

modified. In fact, one of the first-fruits of the new *régime* was to elevate the Immigration Department into a department by itself. The new administrative branch was placed in the hands of a Superintendent of Immigration, who controls the entire organisation from the central offices in Ottawa. The Superintendent's efforts are mainly directed to the obtaining of emigrants, the responsibility of placing them in suitable homesteads upon their arrival in the Far West mainly devolving upon the Commissioner of Immigration at Winnipeg. As the principle of specialisation has been introduced into the work of peopling the West in Canada, so with equally beneficial results has a division of labour been brought about in Europe. Formerly the work in Canada was in charge of the Dominion Lands Department; in England it was entrusted to the High Commissioner. The Hon. James A. Smart, the Federal Deputy Minister of the Interior, determined to separate the purely official from the emigration business, and the decision was arrived at of giving Mr. Preston a thoroughly equipped establishment of his own and an efficient staff to carry out the work under his guidance.

Immigration from Europe.

As the fruits of the new *régime* are only now becoming apparent, recent statistics of emigration into Canada are merely of historical interest, for remarks penned to-day would be out of date before they were well written. As stated in a previous chapter, the number of immigrants registering at Winnipeg between January 1 and October 31, 1902,

SIR WILFRID LAURIER, PREMIER OF CANADA.

was 64,035, but these numbers are not the full measure of the influx, and the officials estimated the total number of incomers for the calendar year at fully 100,000 persons. These figures likewise only relate to Manitoba and the Territories, and one of the features of last year's immigration was the arrival of skilled workmen in the mining and iron-working districts of Nova Scotia. The following table, which only relates to declared settlers, many of whom would be married men with families, is therefore interesting merely as indicating the quarters whence immigrants have in recent years mainly been drawn :—

Nationality.	1898.	1899.	1900.	1901.
From the United States...	9,119	11,945	15,500	17,987
English and Welsh... ...	9,475	8,576	8,184	9,401
Irish	733	1,337	765	933
Scotch	1,400	747	1,411	1,476
Doukhobors	—	7,350	—	—
Galicians	5,509	6,700	6,593	4,702
German	563	780	705	984
Scandinavian	724	1,526	2,380	1,750
French and Belgian ...	545	413	483	492
Hungarians	—	—	—	546
Austrians	—	—	—	228
Russians and Finlanders...	—	—	—	1,726
Other Nationalities... ...	3,832	5,169	8,676	8,924
Total	31,900	44,543	44,697	49,149

It will be seen that in 1901, while the total number of emigrants from the British Isles only amounted to 11,801, there were 17,987 from the United States, and 19,361 from the Continental States of Europe. It may also be noted that there were 29,788 emigrants presumably English-speaking, and 19,361 speaking Slavic and Germanic tongues. A still more important point is that while emigration from

the United Kingdom has remained practically stationary, there has been a marked increase from the Continent of Europe, and an immensely increased movement from the United States.

A remarkable change, however, will appear in the emigration statistics for 1903. An immense increase will be shown in the number of British settlers. Mr. W. T. R. Preston, the Dominion Emigration Commissioner for Europe, computes the number of British emigrants for the fiscal year ending June 30, 1903, at 42,000, and the number of Continental colonists at close upon 38,000. The Immigration Commissioner at Ottawa places the number of arrivals from the United States at 41,953, and gives a total from all countries for the year of 121,631. From his report it appears that the total Continental immigration for 1897 was 8,921 ; for this year (to June 30, 1903) 37,890. The number of immigrants from the United States in 1897 only amounted to 712; this year to 41,953. In 1897, 11,380 colonists went out from Great Britain; during the concluded fiscal year 41,787. The effacement of Finland has been one of the contributory causes to the swelling of the Continental stream, while a feature of the immigration from the United States has been an organised movement among Canadians settled in the States to return to their native country.

Although settlements of foreign colonies are dispersed all over the country, from the Assiniboine River in the east to the Athabasca River in the west, we saw little evidence of their existence until our arrival at Calgary in Alberta, 840 miles from Winnipeg. Around Calgary itself, which stands at an elevation of 3,388 feet and is in the heart of a

ranching country, there are not any foreign-speaking colonies, but from Calgary there runs a railway upwards of 200 miles in length almost due north through the heart of Alberta to Edmonton, opening up a country adapted by climate and the composition of the soil to the growing of that variety of wheat known as Northern Hard. Edmonton is situated in the Saskatchewan Valley, and marks the present northern limit of settlement. The northern watershed of the Saskatchewan is bounded by the vast basin of the Athabasca, whose agricultural capabilities are now being investigated with, it is stated, surprisingly favourable results. Along the Calgary-Edmonton Railway are found many of those colonies of foreign settlers who for the past few years have been landing on Canadian soil from almost every country in Europe. It is stated that more than forty languages or dialects are spoken between Calgary and Edmonton, and at Calgary Fair might be seen such an agglomeration of costumes as one sees at the great fairs of Leipzic or Nijni Novgorod. The various nationalities tend to settle down in colonies, and in some districts might be counted thousands of families of Galicians, Russians, Finns, Scandinavians, Germans, French-Canadians and so forth. At one station you hear German, at another Finnish, at another Galician, at another English, or that variety of it known as American. Such a region would be incomplete without its colony of Mormons and other sects, speaking English or foreign tongues. Winnipeg itself, it is stated, can boast of about forty foreign dialects.

The influx of settlers from the United States

in recent seasons has assumed the character of an invasion. Uncle Sam, it is said, has discovered that the true world's granary is above the 49th parallel, north of the cyclonic belt, where likewise the soil is either richer or has not been exhausted by his merciless system of farming. In the Canadian North-West 25,000,000 acres have been purchased in recent years by persons from the United States, and 5,000,000 acres of this area were purchased during 1902. Only one-fifth, however, of the land purchased last season was actually settled upon; the rest of it is in the hands of American land companies, who have bought it as a land speculation. During the first six months of 1902, 21,000 Americans became located in Manitoba and the mid-Continental territories.

From the agricultural point of view no complaint is made with regard to these American invaders. They are thoroughly conversant with the style of farming required, bring capital and stock with them, and take up large holdings. The European immigrants are also satisfactory farmers, only certain fanatical sects like the Russian Doukhobors giving trouble to the Dominion authorities. These Doukhobors, whom Count Leo Tolstoi introduced to the notice of the Canadian Government, at first insisted upon living on the communal system, which is in direct antagonism to the homesteading system of the Dominion. By individuals at a time they are breaking loose from the communal village life and appropriating their lots like other good Canadians, but every now and again their saints stir up an agitation which completely upsets their equilibrium. Last summer a fanatic named Markoff, alleged to be

an emissary of the Russian nihilists, preached a crusade against the oppression of the brute creation in the tillage of the soil, inducing a number of the Doukhobors' families to turn their horses, cattle, pigs, and poultry adrift on the prairie. The fanatical sect, however, did not comprise more than about 10 per cent. of the Doukhobors in Canada, and were mostly located in the Yorkton district of Eastern Assiniboia. Among the Doukhobors as a class it is a matter of principle never to eat meat, but the enthusiasts, who made the memorable pilgrimage from Yorkton over the Manitoban border in the early snows of last winter, were imbued with extreme tenets as to the sinfulness of compelling animals to do service for men, the wearing of woollen or leathern garments, and the eating even of food in which milk or butter is used. The fanatics, however, as the event proved, although creating a very awkward coil for the Dominion officials, were speedily brought to reason by the sufferings entailed by the inclemency of winter's approach, and the presumption is that in subsequent revivals the fervour of their zeal will abate as their material well-being increases. There is every reason to expect that in the course of a few years the Doukhobors will fall into line, for Canada is a big country, and pre-eminently a land of tolerance.

Assimilation of Foreign Elements.

The process of assimilation of these peculiar people will undoubtedly be slow. An analogy may be drawn from the Menonites, the Russo-Germanic sect previously alluded to, which were settled in

Manitoba nearly twenty years ago. These people are now among the richest farmers in the province, their homesteads are among the best in the country, and they have gradually abandoned communal life to live on their farms. On the other hand, these Menonites are exclusive, and have not become Canadianised like the Danish, Swedish, Icelandic, and other German settlers. Like these they have acquired a knowledge of the English language, though they do not speak it habitually, but they take but a detached interest in the political and social life of Canada. They are, and may long remain, Slavic islands in the English-speaking Continent. Meanwhile their numbers are increasing.

So long as the volume of emigration from the United Kingdom was maintained at a satisfactory level, the advent of these foreigners was regarded with equanimity. For some years, however, the tide of British emigration was diverted to South Africa, and British Canadians were bitterly disappointed to find that the stream of their own kindred threatened to run dry. Canada is the nearest, and in every respect the greatest, of British colonies, and its ruling classes are the most loyal subjects of the Empire; but the question arises, would it remain so indefinitely if the English-speaking community found themselves outnumbered in an electorate which might be composed of patriotic Canadians, though not necessarily patriots to the British Empire? Most of the foreign immigrants were penniless to start with, and their horizon was bounded by the daily cares of existence. Soon they will be rich and powerful. They participate in the splendid system of State-education, though they

naturally retain among themselves the languages of their original homes. Amidst affluence and culture will their sympathies turn to the countries from which they sprang, or will they look with approval beyond the southern frontier, and aspire to imitate the great cosmopolitan Republic of the United States, 30 per cent. of the citizens of which are of Germanic blood and to no small extent use Germanic speech? Will Canada, it is also asked, be Americanised if the American invasion, an invasion of both men and capital, assumes still more formidable volume?

These questions, of which the British public at home knows nothing, and cares nothing, while with complacent satisfaction it reckons colonial loyalty as one of the permanent assets of the Empire, are exercising the thoughts of many Canadians. At the same time the decline of British immigration assumed the character of a bitter grievance among the old Canadian people—the governing, commercial, and opulent classes, most of them, of course, men of English, Scottish, or Irish birth or descent. Neither do the French-Canadians regard the advent of Slavish nationalities with indifference. Nothing is more incomprehensible to the visitor from England than the ardent attachment of the French-Canadians to the British Crown. I cannot pretend fully to analyse this phenomenon; I certainly cannot doubt its sincerity. From the moment you land at Quebec you feel its presence, and the phlegmatic Saxon is conscious of failure to reciprocate the warmth of feeling that these demonstrative people display. None of the commonly accepted explanations of French-Canadian loyalty seem to me sufficing;

but I incline to the belief that the feeling arises from emotions deep seated in Celtic nature, that it has something in common with the clan fealty of the old Scottish Highlanders, or the devotion of the Jacobites to the House of Stewart, and that this loyalty of which we in England are so proud is primarily loyalty to Canada, and is only indirectly concerned with England. Every Canadian loves Canada; but nowhere is this patriotism so passionate as among the French-Canadians of the Province of Quebec. In other words, they are Canadians first and Britishers afterwards.

Have we good ground for assuming that the other nationalities which have been planted in the Far West will follow in the footsteps of the French of the Lower St. Lawrence? The majority of Canadian politicians seem to think that we have, the common belief being that all will soon be welded into one people, united in loyalty to the Empire under which all alike enjoy so many blessings. Nothing is more remarkable than the shortness of time required to convert men, and still more so women, into Canadians; and unless, through the operation of causes yet unborn, the conditions of life in this happy country should undergo an extraordinary change, it is reasonable to assume that national life will become more vigorous instead of undergoing decay, and that implies aloofness from the United States, with its corollary—attachment to the British Empire.

These considerations, however, do not dispose of the British emigration question. While in Canada I scarcely conversed with a single Canadian who did not protest against the absurdity of the Imperial Government inaugurating schemes for promoting

emigration to South Africa, while displaying absolute indifference to the interests of Canada. They believe it to be a matter of Imperial concern to preserve the British character of the people; at the same time, it is urged that in the development of Canada's vast resources, which demand population, the Colony has a claim upon the Mother Country, while the latter in being apathetic is blind to its own interests.

For my part, when I thought of the poverty and overcrowding in England, and compared the hard lot of our masses with the ease, comfort, and plenty enjoyed by every rank and class of people in Canada, I could not but weep to think that our impoverished millions could not be transferred to a land wherein all could secure beautiful homes, and where there is the potentiality of inexhaustible returns for honest labour.

Factors of Success.

The salient feature of last year's immigration was the scattering, of their own choice, of the homesteaders all over the vast area of the Government lands. Although the hardy ploughman may unhesitatingly face the privations of the open steppe, those who have been accustomed to the comforts of farm-life at home, and who have some capital to begin with, would be well advised to buy land in the settled districts near towns and railway stations, where they can obtain the luxuries they have been accustomed to, and can command a better price for their produce. Even if they pay $10 or $12 per acre for the land, they may clear the outlay in a few years;

and in such districts the country is assuming more and more the pleasing aspect of established cultivation.

The surface of Manitoba and the Territories has been mapped out by the Dominion Survey in districts called townships, 36 miles square, according to the astronomical bearings. Each township is divided into 36 square sections, and farm holdings

HOMESTEADER'S "SHACK" AND WAGGON.

may be sections, half-sections, or quarter-sections. A section embraces 640 acres, a half-section 320, and a quarter-section 160. Hence in Canada it is unusual to speak of farms, but of so many sections or parts of a section. In each township two sections have been set apart for educational purposes.

Although Dominion statesmen are most anxious to obtain settlers of the agricultural class who (like

the peasants of Scandinavia and Iceland, the best who have come to Canada in recent years) will attach themselves to the soil, it would be a mistake to imagine that the field is limited to this category. A common topic of conversation among the people I met was the number of prosperous farmers who a few years ago were office clerks or drapers' assistants in the cities of Ontario; and not a few of the same description may also be met who have come out from England. So simple is farming that the farmer and one assistant often—nay, generally—do all the work of half a section—320 acres—only employing a few extra hands at harvest.

The majority of the farms in Manitoba are half-sections, while in the newly settled lands the great majority are quarter-sections; but farms may be seen in every province of two, three, or more sections in one block. As showing what it takes to start operations, I may quote an estimate given to me by Mr. Young, of Winnipeg, who, as I mentioned before, is himself a practical farmer. This estimate is rather more liberal than those quoted in the official handbooks, but it applies to a man starting operations upon a half-section (320 acres) in a style of magnificence as compared with the bulk of the 160-acre homesteaders:—

	Dollars.
Cost of binder	125
Seeding machine	80
Mower and machine rake	100
Two "sulky" ploughs	150
Harrows	25
Miscellaneous, including a cow	100
Six horses	800
Farm buildings	200
Total	1,580

This estimate (amounting to £316) is, of course, exclusive of the cost of land, supposing that the whole or any part of the holding has been acquired from a railway or land company. The Canadian Pacific Railway last year had still 16,000,000 acres of land, most of it of average fertility, to dispose of in Manitoba, Assiniboia, Saskatchewan, and Alberta. As the company was offering quarter-sections of this land at $5 per acre, it will be seen that for a sum equal to the rent of one year which the majority of farmers in England and Scotland pay to landlords, they might purchase small estates in Canada. Not only will the farm repay the original outlay in a few years, but the possessor has the priceless advantage of being his own squire. That most of the settlers should be prosperous is not to be wondered at. Again to quote Mr. Young's cautiously calculated estimates, it costs on an average $6 to crop an acre of wheat, and 20 bushels of wheat at 55 cents a bushel—a conservative estimate—to the acre, will bring in $11 to the farmer. I have seen statements to the effect that very little profit is left to the farmer in the Far West, as railway and other freight charges consume an extortionate part of the price paid for his produce. On travelling from Winnipeg to Indian Head I questioned Mr. Williamson, one of the officials of the Ogilvie Flour Mills, upon this point.

"The price of wheat to the Manitoban farmer," said Mr. Williamson, "is based on the price at Fort William, the farmer receiving the Fort William price minus the freight rate to the C.P.R. and elevator charges there. These charges in the Province of Manitoba run to about 18 cents per

100 lbs., or 10½ cents per bushel. The average cost from points in the interior is 10 cents per bushel to Fort William, and storage and floating charges are no more than ¾ cent per bushel. From Fort William to Liverpool the average freight rate for wheat does not exceed 22½ cents per 100 lbs., or about 13½ cents per bushel. This is an outside estimate, for wheat can generally be chartered at less than that. The freight from Fort William to Montreal is 15 cents per 100 lbs., or 9 cents per bushel, the ocean freight being the only variable element. The interior freight, controlled by the C.P.R., is subject to practically no variation. The Brandon rate is usually the standard for Manitoba, and may be taken at 18 cents per 100 lbs., or say Brandon through to Montreal, 33 cents per 100 lbs., or 20 cents per bushel, after which the ocean freight may be as low as 5 cents a bushel, or even less. Wheat has been carried across the Atlantic for the same cost as from Montreal to the Lachine Rapids, five miles away."

The heavy cost of transportation is the chief handicap with which the farmer of the Canadian West has to contend, and is primarily a consequence of his remote situation from the great consuming markets of his breadstuffs. Relief from this onerous burden can only be secured by the gradual extension of transportation facilities, but in all probability that extension would benefit the consumer as well as the producer. An addition of one thousand million bushels to the world's wheat supply within ten years from hence (to quote Mr. McKellar's prediction) could hardly fail to further depress the price of the staple food commodity, for that would

place Canada's Western harvest several hundred million bushels in advance of the entire crop of the United States, which in 1901 only amounted to 720,000,000 bushels—and that a bumper crop. Still, transit costs will unquestionably be reduced within the next few years, and if the Manitoban farmers are amassing wealth with their present disadvantages, how bright, it may be asked, is the vision of future plenty?

I am no stranger to the toils and anxieties inseparable from the husbandman's avocation whether his lot is cast in a rack-rented Scottish shire or in an agriculturists' El Dorado like Manitoba, but I have no scruple in affirming that, whatever be the vicissitudes of the seasons and the fluctuations in the value of produce that has to be placed in the open markets of the world, that farmer who owns his land enjoys a superiority above all others, and, whether poor or affluent, has a sense of security and independence of mind which raise him above all the struggling ranks and professions that are detached from the soil. What independent master of his prairie domain would exchange places with those—

> "Poor tenant bodies scant o' cash.
> How they maun thole the factor's snash;
> He'll stamp and threaten, curse and swear,
> He'll apprehend them, poind their gear;
> While they maun stand wi' aspect humble,
> And hear it a', and fear, and tremble"?

Well do I know that the position of the majority of the tenant farmers of Scotland is no more enviable to-day than it was in the time of Burns.

CHAPTER XIII

THE WILD WEST OF THE FOOT-HILLS

THE traveller westward bound by the Canadian Pacific Railway generally catches his first glimpse of the Rocky Mountains at Calgary, the chief city of the unorganised province of Alberta. The wheat belt has now been left far behind, and for hundreds of miles the railway rolls along its seemingly infinite metal track amidst surroundings which have nothing in common with the eastern prairie save their apparently boundless expanse. We are now in the great ranching country that separates the grain-growing steppe from the western backbone of the continent—on the high prairie plateau which gradually rises to the base of the mountains. A billowy ocean of grass has succeeded to the seas of yellow corn, and from morning until nightfall the traveller, from the open windows of his luxurious moving hotel, may gaze upon a scene of primeval wildness, where great herds of horses and thousands of cattle roam right up to the railway track, leading a life as free and natural as that of the bison and prairie horse which preceded them in these pastoral solitudes. Here and there, at long intervals, cowboys may be seen rounding up the

herds, and more rarely an Indian camp excites the curiosity of the traveller from Europe.

In a triangular area several times the extent of Yorkshire, extending from about Medicine Hat in Assiniboia to Calgary and Macleod in Alberta, some of the largest and most famed ranching lands and biggest cattle farms in the Dominion of Canada are situated. One of the largest ranches in this district embraces an area of about 115,000 acres, and affords grazing summer and winter alike to upwards of 8,000 cattle and several hundreds of horses. Medicine Hat is the chief centre for the shipping of cattle, and Calgary and Macleod are the chief shipping points for horses. At these places large numbers of cavalry mounts were shipped for the Boer war, and thousands more might have been obtained had not Canada's ability to supply material for the campaign been underestimated by the War Office. Needless to say, many of those Canadian Rough-riders, whose skill in the saddle was the wonder of the army in South Africa, came from the ranching uplands of Alberta.

In the vast solitudes of Alberta fortunes have been made by ranching. The houses of some of the ranch-owners, far remote from the railway and from towns, are like English country seats, situated generally upon the sheltered banks of the rivers that descend from the Rockies to the Saskatchewan, and surrounded by gardens, wherein bloom many of our English flowers. The railway traverses the most desolate part of the country. Alberta is not an unbroken waste of rolling grassy dunes. When you strike the valleys of the majestic affluents of the Saskatchewan scenes of romantic picturesqueness

meet the eye, and in the whole of the western half of the province the horizon to the west and south is bounded by the long, sombre parapet of the Rockies, capped and ribbed with eternal snow. The Canadian ranchmen are mostly Englishmen and Scotsmen, whose wealth has enabled them to introduce the manners of the English squire in the wildest west,

RANCHING SCENE IN ALBERTA.

and the nearer you approach to the Pacific the greater are the influences of English example all around. Although land companies have often been failures through mismanagement, the resident rancher has flourished in a country where he could obtain perennial feed on a range sometimes 70,000 acres in extent at 2 cents (one penny) per acre, on lease from the Dominion Government. It is only

rarely that the land for grazing ranges is purchased outright, the Dominion Government rightly reserving the land for homestead purposes. In regard to the acquisition of a free grant of land the rancher is in precisely the same position as the immigrant who applies for a homestead in the arable plains to the east. He is entitled to 160 acres in which to plant his steading, and for grazing may lease an almost unlimited domain, subject always to the condition that the whole or any part of it must be relinquished for homesteading purposes.

Among the surprises which await the European traveller in the Canadian Far West are the size of the stores in the "cities" and the great value and variety of the stocks with which they are replenished. Amazement may diminish, but does not entirely vanish, when it is explained that these cities are the collecting and distributing centres along the trans-continental highway for areas sometimes of 200 or 300 miles radius. The stocking is frequently of a sumptuous character, and although the great bulk of the goods is of Ontario and United States manufacture, British-made goods are fairly represented, and as many of the store-keepers have come from the Old Country, there is a disposition to favour the English article as against the produce of the United States. These stores afford an index to the wealth that is diffused throughout the country, and it should be remembered that the demand for articles of luxury is only in its infancy. The style of living of a great proportion of the farming population is that of the pioneer, and those whose tastes create a market for the costly articles of European manufacture seen in the shop windows of Brandon and Calgary are the exception,

not the rule. As wealth accumulates, population increases, and education spreads, the market will broaden, and for a great variety of British manufactures Manitoba and the Territories should become a lucrative market.

Among the Ranchmen.

In a tour which afforded such an abundance of materials for instruction and entertainment it might seem base to prefer a single complaint. We had one, however—that we did not see ranching life in its most unconventional aspect. In the neighbourhood of Calgary the ranges have passed into the condition of mixed farms, fenced, irrigated, and to a large extent under cultivation. We visited one of the show farms of the district, the range of Mr. Pat. Burns, one of Alberta's cattle kings, and were entertained to a delightful luncheon in a marquee erected in his beautiful grounds. We should have preferred to witness the rounding up of cattle herds in the wildest prairie, but if we had not that excitement, we had the satisfaction of observing the degree of cultivation which by the help of irrigation is possible over large stretches of this lofty, well-watered tableland. The average height of the land surface has now risen to upwards of 3,000 feet above sea-level, and although there is a deficient rainfall, the country has a never-failing supply of available moisture in the countless rills and ample rivers that flow from the gathering-ground of winter snows in the mountains. The Bow River, with a torrent greater than the Thames or the Tay when we saw it in the dryest season of the year, and when it is shrunken to a fraction of its

normal volume, sweeps past the town of Calgary, and follows a winding course through a vale in the swelling uplands which ascend in terraces of long-sweeping contour to the sharply defined base of the majestic cordilleras that like an admantine rampart stretch from north to south over the western horizon. The view of the Rockies from Calgary has been compared to the view of the Alps from the plains of Lombardy. This noble scene was exposed to our view during a long drive from Calgary to Mr. Burns's farm. We began to feel wearied of the plain, and like Waverley I longed to penetrate behind the barrier of dusky mountains, where a new world of wonders awaited us.

Although the cattle on the ranges of Alberta are unfinished stock, it is a great mistake to suppose, as many people do in Great Britain, that they are coarse animals, with the shaggy pelt of kyloes or the bony framework of the aurochs. The farmers of the ranching country are as sensible of the advantages of a good strain as our home breeders are, and have been at great pains to improve the quality of their stock. The Shorthorn breed seems to predominate, but one may see magnificent specimens of the Aberdeen-Angus, the Hereford, and the Galloway breeds. When brought to the railway stations for shipment the cattle present a fine healthy appearance, for the most part like the cross-bred stirks at a cattle market in the Scottish Lowlands, very different from the haggard and buffeted state in which they may be seen at the close of a stormy passage across the Atlantic. I had as fellow-passengers on the homeward voyage some four hundred three-year-olds which had been

entrained at Medicine Hat. These stood the passage remarkably well although we encountered a southerly gale in mid-Atlantic, but they certainly had lost the fresh, clean appearance with which they left the wolds of Alberta, and would have benefited immensely by a few months' rest and stall-feeding after arrival in England.

For me the name of Calgary will be associated with two never-fading memories—the panorama of the Rocky Mountains, forty miles away, a hundred peaks gleaming in the clear limpid atmosphere of the day, and the majestic spectacle of the firmament at night. Calgary stands at an altitude of 3,388 feet above the sea. The atmosphere is not only rarefied, but from the absence of watery vapour singularly transparent, and the skies surpassed in magnificence anything I had previously beheld. The streets of the town after dark were silent and well-nigh deserted, and if the amenities of the place embrace a theatre, or other place of diversion, we were ignorant of the fact. We discovered at the station a really comfortable refreshment-room, a rarity in Canada, and after resting and regaling ourselves there, strolled along the track, finding in the contemplation of the skies an employment of the faculties which, I hope, the facilities being so exceptional, is not neglected by the people of Calgary. Here was revealed to me, as it had never been before, the full splendour of the Milky Way, which, traversing the vault of heaven in a direction almost north and south, was displayed in all its streams, main and branching, with a brilliance and definition never beheld through the more humid skies of the British Isles.

CHAPTER XIV

CROSSING THE CANADIAN ROCKIES

IN the interval of four centuries which has elapsed since the Conquistadores plundered the temples of the Incas, and drove the trembling aborigines to the mountains of Bolivia and Peru to win gold to support the pride of Spain, mining for the precious metals has traversed the long chain of the Andes and Rocky Mountains through Mexico and California, from the Salt deserts of Chilé to the snows of the frozen Yukon. British Columbia and the Yukon are the regions most recently penetrated by the prospector, and after accomplishing a journey of 2,300 miles from Montreal, traversing the grain-growing and ranching steppes which stretch from Lake Superior to the Rockies—a distance of 1,300 miles —the West-bound traveller finds himself amidst strangely altered surroundings and interests, in the most mountainous region of the northern hemisphere between the Asiatic Caucasus on the east and the Himalayas of Asia on the west. Here, deep in her loins, the earth has hutched her natural riches, and in striking contrast to the easily tilled plains of the prairie, the forces of Nature have conspired to baffle man in winning from the mountains their store of metallic treasure.

MOUNT SIR DONALD.

In the present state of our knowledge of the geology of vast areas of the earth's surface it is rash to assert, as its citizens do, that British Columbia is the most highly mineralised country in the world; but it is assuredly safe to say that its mountains of ore, low-grade though as a rule the latter may be, form one of the world's greatest reserves of the precious and commercial metals still awaiting the advent of capital and the mining engineer. Over immense areas, ores yielding gold, silver, copper, and lead have been located in mountains ranging from 2,000 to 7,000 feet above sea-level; but the exploitation of these is retarded by obstacles arising out of the physical structure of the country, which can only be overcome by vast engineering works and an enormous outlay of capital. The entire area of the country, 382,000 square miles, is ridged and crumpled into a tossing ocean of mountains, cañons, and precipices, presenting inconceivable obstacles to the creation of the indispensable transport agencies.

Unlike the dwarfed vegetation of the natural prairie, the flora of the Alpine Regions of Alberta and of British Columbia is luxuriant beyond description, and presents further difficulties in the way of cultivation and the exploitation of minerals. The forest belt sometimes ascends to an altitude of 8,000 feet above sea-level, and the impenetrable bush long rendered the valleys impassable excepting to the daring mining adventurer able to carry a pack of 100 lb. weight upon his shoulders for hundreds of miles of tangled trail up the beds of the Columbia and Fraser Rivers. When, hardly more than sixty years ago, British pioneers, after a voyage of six months or more round the Horn,

landed on Vancouver Island and the mainland of Columbia, so dense was the primeval bush that a day might be spent in penetrating a mile from the beach. Where the cities of Victoria and Vancouver now stand, dark forests, the haunt of the bear and the puma, advanced the unbroken phalanx of their colossal stems to the rocks of the sea-shore; and the mammoth stumps of these felled giants of the forest are only now being slowly removed with Herculean toil to clear the land for "townsites" and farms. Three-fourths of British Columbia is still uncultivated; and of the 285,000 square miles of unreclaimed land there is hardly an acre that is not forest, water, or mountain crag. The virgin forests are the most extensive still remaining on the North American continent; and although the whole province has been proved to be worthy of prospecting for minerals, not more than 20 per cent. has as yet been examined in detail, by which means alone its untapped riches can be revealed.

During the past few years the progress of British Columbian mining has attracted much attention in England—and a great deal more in the United States, which has had the address to secure many of the richest ore chutes, and to supply all the mining machinery—but the Englishman who visits this distant part of the Empire soon becomes painfully aware of the meagre knowledge we at home possess of a country which sooner or later will be hailed as the most enchanting of all the lands which own and maintain Britain's sway. No other portion of the Empire can match its scenery and its delicious climate, none excels it in fertility, and none can boast of greater or more varied mineral riches.

LAKE LOUISE.

If neglecting the political divisions, which assign to Alberta a large part of the mountainous country, we look upon the entire region west of the Rockies as one geographical whole possessing clearly defined physical features, we find that this incomparable land is like Switzerland and the Tyrol upon a vast scale —or like a score of Switzerlands, with loftier mountains, larger lakes, mightier glaciers and rivers, and with a magnificent seaboard in addition, all joined in one. Had it no other attractions, its face alone should prove its fortune; and, when its wonderful lake-lands—some of which are now accessible by railway and steamboat—are more generally known, tourists who can afford the time and the money will flock in ever-increasing numbers to these Far-western fairylands above the clouds in the Rocky, the Selkirk, and the Cascade Mountains. Already the Canadian Pacific Railway Company has built several tourist hotels in these romantic solitudes, and wealthy Americans have discovered that there are no holiday resorts in the world to surpass, if even to compare with them. The whole province abounds in subjects of interest, and I can hardly touch upon a single topic with regard to which English readers do not stand in need of enlightenment.

Banff National Park.

After the railway ride of a thousand miles from Winnipeg to the Foot-hills over the arid prairie, every traveller who can afford the time breaks his journey to obtain a day's rest and tranquillity at Banff in Alberta, the first of the health resorts of the Canadian Rockies. The Pacific Express reaches this

romantic retreat in the morning, in time for breakfast at one of the elegant hotels perched upon the mountain slopes; but long before the train draws up at the platform passengers have arisen from their slumbers to feast their eyes upon the distant purple domes and snow-clad peaks and the nearer buttresses of naked rock that rise thousands of feet sheer from the gorge up which the train slowly crawls in its ascent into the mountains. Wearied traveller never tottered up to the gates of an Alpine hospice with profounder thankfulness than the British Editors drove up to the imposing portals of Banff Springs Hotel. It was the morning of Sunday, the last day of August, and we rejoiced at the prospect of two days' rest amid the sequestered dells and plashing rills of a mountain retreat where no public function would mar our repose, and where there were no strenuous captains of industry to tax our faculties by expositions of the "boundless resources of the Dominion." We certainly could make no complaint of lack of kindness or hospitality on the part of the Western agriculturists. We should have been churlish indeed had we not endeavoured to act up to the hospitality that was prepared for us with lavish kindness; our only complaint was that our own physical endurance was o'ermastered by the immensity of the "proposition."

Banff in the Rocky Mountains has no resemblance to the ancient royal burgh, whose name it takes, on the shore of the Moray Firth, but the name is by no means inappropriate, for the scenery of the Canadian Banff has much in common with the scenery of the Highland parts of Banffshire. I know not who gave the New World Banff its name. If it was Lord

KICKING-HORSE RIVER.

Strathcona, he must have been impressed with the striking similarity of its surroundings to the scenery of his native county—to Craigellachie, for instance, or other romantic places in Strathspey. It is true that Banff in Alberta stands at an elevation of 4,500 feet, and the mountains which encircle it rear their summits other 5,000 feet towards the sky, and that these mountains have vertical sides and shivered peaks far more romantic and picturesque than the hummock-backed hills of the Grampians and Ben Aven, but the near scenery is very like that of the Scottish Highlands, and the forest trees are all but identical. Some of the species are distinct, but the same genera are represented, and the dark spruce paints the hill slopes and the ravines in the sombre hue of the landscape of Deeside and Strathspey. One homely feature was missing: the bell-heather which in autumn mantles the Highland hills in crimson is absent from the Rocky Mountains. If any species of Erica blooms there, I did not come across it; but on the uplands of Alberta I saw patches of the Scottish Bluebell—*Campanula rotundifolia*, the identical species so far as I could identify it. Where there is soil sufficient to give foothold to vegetation the spruce clothes the Rockies as mosses and heather clothe the Grampians. As showing how genial is the summer climate, I may mention that far up the mountain brow I plucked clusters of wild red and white currants, and gathered red gooseberries as large as some garden varieties.

But most of the mountains encircling Banff are stupendous masses of bare strata, sometimes almost perpendicular, though more often tilted at a high angle, destitute of vegetation almost to the base,

sculptured and fluted by ice erosion and the rending action of frost into the most fantastic and eerie shapes conceivable. The site of Banff was chosen as a health resort soon after the opening of the C.P.R., owing to the thermal springs which well from the mountain side, and the dust-stained traveller may refresh himself by a glorious swim in the deep pools and caves, basins of ancient geysers, now filled with an inexhaustible flow of tepid sulphuretted water. After the muddy and sluggish rivers of the Territories, the clear, rushing rivers of the mountains gladden the eye. The tint of these glacier-fed streams is surpassingly beautiful, here the deepest emerald, there uranium green. The Bow River flows down the main valley, and under the rocky eminence upon which Banff Springs Hotel stands, leaps over a series of thundering cataracts about half a mile in length, uniting its waters in a lynn at the bottom with those of the Spray River—another glacier-fed mountain torrent. These cascades are declared to be the most picturesque waterfalls in America.

Banff is situated in the National Park of Canada, a reservation of five thousand square miles, embracing some of the most sublime scenery in the New World. Banff National Park is the Yosemite Valley of British America, and will soon be equally famous. All are free to roam over this immense area of primeval forest, river, lake, and mountain; but although fishing is allowed, none may carry a gun or bring a dog, as the native fauna is rigorously protected. Corrals have been set apart for bison, moose, deer, and elk, and the Dominion Government is constructing roads and bridle-paths among

the mountains. These roads are the best we saw in Canada.

The Alpine chateau at Banff, in contrast to the rather backward hostelries of the prairie country, afforded every luxury and comfort. Even the office, that comfortless common resort in the ordinary American hotel, had the grandeur and imitated the

A BIG-HORN TROPHY.

style of a baronial hall. Lordly trophies of the chase decorated the walls, and at either end was a huge open hearth, on which—such was the chilliness of the evening air among the hills—an immense pyre of great resinous logs was piled, and a wide semi-circle of men and women in evening dress gathered around to enjoy the warmth and the ruddy glow.

By day one might bask in the sun on the terraces, watching the squirrels clambering among the trees—so tame, or so fearless, that one may almost approach close enough to lay hold of them. These squirrels are smaller than the European species, but their most remarkable attribute is the shrill cry which they emit on the slightest alarm. We had some magnificent outings among the hills, and every one of us washed the prairie dust from the skin in the sulphur pools.

Surmounting the Selkirks.

When with reluctance one tears oneself away from Banff, with its Highland pastimes and sylvan retreats, the crossing of the Rockies begins in earnest. With this no other railway journey can compare. At Banff an elevation of 4,500 feet has been reached, and the highest altitude attained by the railway is only about a thousand feet more. At the station of Stephen the track reaches the "Great Divide" at a height of 5,296 feet, where a sparkling stream may be seen dividing into two, the waters of one branch flowing to the Pacific, and those of the other to the Saskatchewan and Hudson Bay.

As the railway follows its tortuous course through chasm and cañon, by the brink of foaming torrent, along sills of beetling crag, and under the shadow of giant mountain, the engines alternately labour up a steep ascent, and then thunder down into a yawning gorge. But it would be a mistake to suppose that the locomotive plunges down the steep descents with a velocity comparable to the gradient. The

SHOULDER OF MOUNT STEPHEN.

very reverse is the truth. The steeper the downward course, the more slowly the train is made to crawl. Until the "Great Divide" is crossed there are no extraordinary gradients, the ascent from Calgary being gradual, and for a mountain railway gentle and easy. But on the western side of the watershed it is quite the reverse. A little distance beyond Stephen a station is reached called Hector, where formidable gradients become common. In a space of eight miles the track descents 1,140 feet, or more than it had ascended in the last sixty miles on the eastern slope. There are three gradients of startling angle—one of 162 feet per mile, one of 174 feet per mile, and one of 237 feet per mile, or 1 in 22. But here the speed is reduced to five miles in the hour, and so leisurely does the train glide down the pass, with full break power applied and steam shut off, that, as the saying is, a passenger might get out and walk round and round the train. To the tourist this sluggish progress is an inestimable advantage, for not only does it ensure his safety, but it affords him leisure to feast his soul with a scenic banquet as yet almost untouched by painter and poet. Unfortunately, between Banff and Vancouver a third part of the incomparable panorama is lost to the traveller, as he must miss some of the finest stretches of scenery past which the train flits in the darkness. A man may also bewail the limitation of human faculties, for without eyes in the back of his head he cannot look through the windows on both sides of the carriage at the same time. Thrilling as the pleasure of crossing the Rockies and Selkirks in the train may be, the passenger yearns to adopt the *rôle* of the Alpine

climber to view these scenes of sublimity from the mountain brow.

British Columbia is traversed not by one but by four parallel mountain systems; and as soon as the spine of the Rockies is surmounted, the ascent of the glacier-girt Selkirk Range is begun. Roger's Pass in this range is the eeriest part of all the journey. Here it was that the engineers and surveyors of the Canadian Trans-continental line were driven to despair and well-nigh baffled. The pass was named after Major Rogers, who in 1883 ascended the dark defiles of the Selkirks, and was the first human being to penetrate to the summit of the central range. Here half a dozen glaciers may be seen at once; and at Glacier House, some distance down the pass, a stupendous glacier, declared by the residents to be greater in magnitude than all the glaciers of Switzerland put together, almost overhangs the railway.

At Roger's Pass those giants of the Selkirks, Tupper and Macdonald, some 14,000 feet in height, close in upon the railway, their black battlements rising thousands of feet sheer overhead. The scene is one of awful—almost terrifying—sublimity, and the emotions it excites are intensified rather than diminished by the darkness of the long snow sheds through which the train shoots at every other thousand yards, as, rocking upon its narrow ledge, hewn out of the living rock, it swings around the breastworks of the mountain, and follows the abrupt curvatures of the cañon.

Two days are consumed in crossing the mountain ranges. Long before the sun has set the abysmal depths of the ravines through which the train

labours in alternating rise and fall are filled with gloom, while high overhead the mountain brow gleams with dazzling light or reflects the splendours of the sinking sun. A little later the afterglow suffuses the loftiest summits in opalescent tints, and hard by the serrated peaks stars are descried twinkling with fast increasing brightness in the saffron green of the sky. But, save on the moun-

THE GREAT GLACIER.

tain tops, twilight is short-lived ; deep in the passes "at one stride comes the dark," and the curtain suddenly falls upon the panorama which all day has entranced the traveller.

On the evening of the first day spent amidst these sublime solitudes, as we watched the crimson glow retreating up the glaciers which flank the dome of Sir Donald, the monarch of the Selkirks, our train drew up at Glacier House, one of the charming

chalets built by the Canadian Pacific Railway, where a halt is made and the table spread for passengers. These chalets were at first intended for mere dining-rooms, as it is impossible to haul a dining-car over the Rockies. They are now being converted into spacious hotels, where tourists may reside in order to explore the mountains and glaciers, or hunt the Big Horn, the great mountain-goat of Canada. The Selkirks offer a splendid new field to mountain climbers, and Swiss guides are employed to conduct the adventurous spirits now flocking hither in considerable numbers.

On the following morning daylight revealed the turgid current of the Columbia River, rolling over a broad bed of white pebbles and boulders by the side of the railway track. At Revelstoke the railway parts company with the Columbia River, and enters Eagle Pass, which cuts at right angles through the Gold Range, the third of the mountain systems which the railway has to surmount. Begbie and Mackenzie, glacier-ribbed mountains almost as lofty as the towering giants of the Selkirks, flank the deep pass, which is densely wooded with Douglas firs and cedars, the characteristic forest trees of British Columbia. Beautiful lakes diversify the scenery, and ere long we reach Craigellachie—almost all these points are named after places in Scotland—where, on November 7, 1885, the last spike of the Canadian Pacific Railway was driven, the rails from east and west here being joined.

The railway first skirts the Eagle River, then the Thompson, and finally strikes the lordly Fraser River (famous in the history of placer gold-mining), whose course we follow to the sea. To passengers

who have accomplished the journey without a break this is now the fifth day from Montreal. Early in the afternoon we arrive at Vancouver, whence a handsomely equipped steamer conveys passengers to Victoria, the provincial capital.

The last stage of the railway journey is probably the most interesting stretch of the long ride of three

FOUR TUNNELS, FRASER CAÑON.

thousand miles. The fourth and last of the parallel mountain ranges, the Cascade or Coast Range, is pierced by the cañon of the Fraser River, the scenery along which is even more wild and startling than that of the passes of the Rocky and Selkirk mountains. Far beneath the railway ledge the mighty river boils and surges, anon chafing the

basalt walls of its narrow channel, now darting madly forward, or swirling in a profound maelstrom before leaping over a thundering fall. At Yale we enter upon the broad alluvial valley which stretches all the way to the noble delta where the Fraser mingles its green waters with the blue waves of the Pacific Ocean.

CHAPTER XV

VICTORIA AND VANCOUVER ISLAND

NO pleasure of travel transcends that of approaching a beautiful city by water. Some of the most famed scenes of the Old World are of this nature. For centuries travellers have extolled the prospect unfolded as the mosques and minarets of Constantinople rise in view; and equally famous are the palaces of Venice seen from the Brenta. The glittering dome of St. Isaacs and the green islands of the Neva ravish the sight of those approaching St. Petersburg by the Gulf of Riga, but among the water cities of Europe all yield to Stockholm, the Lady of Lakes and Islands. In the Dominion of Canada two scenes are equally bewitching, if not equally famous—the approach by the St. Lawrence to Quebec, the portal of the Atlantic, and the approach to Victoria, the portal of the Pacific.

Victoria is eighty miles distant from the mainland, and the trip from Vancouver City generally occupies about six hours. The scenery has some resemblance to the fiord at Stockholm, with which it has often been compared. For the greater part of the time you sail among picturesque islands; and across the Straits of Georgia may be seen, a hundred miles away, the snow-capped summits of the Olympian

Mountains, the lofty coast range of Washington State. Situated on a deep inlet at the southern extremity of Vancouver Island, Victoria is screened from view until the steamer, rounding a rocky promontory, drops almost suddenly into the spacious harbour. Shipping and warehouses, villas along the shore and upon the wooded heights, lofty churches and public buildings, and, towering above all, the noble pile of the new Parliament Buildings, all come into view with startling suddenness as the steamer glides smoothly into the deep pellucid basin.

The steamboat of the Pacific Express reaches Victoria in the evening, and there are few visitors to these shores who do not declare the Victorian sunset the most gorgeous they have ever beheld. We had left the mainland shrouded in mist—an unusual phenomenon in the delightful climate of British Columbia—but when we got out upon the broad bosom of the Straits of Georgia the sun broke through the haze, and the clouds which obscured the Olympian Mountains melted away until only one long riband of white vapour lay along the middle altitude, above which the purple and snow-flecked peaks rose gleaming in the deepest blue. As evening approached, the sun dipped behind the mountains of Vancouver Island amid lowering masses of purple storm-cloud, suspended in a field of rose-madder and fiery orange-red. Pink and coppery-green rays spread like an aurora over the vault of heaven, and the Olympians in the east reflected the crimson glow. 'Twas a scene worth travelling six thousand miles to behold. It brought every one on deck, and either silenced or brought forth the rapturous praises of the most unemotional.

OLYMPIAN RANGE FROM VICTORIA.

After all I have written in praise of Canadian hospitality I risk exposing my testimony to discredit by affirming that the welcome which awaited us at Victoria surpassed everything which we had hitherto experienced. The kindness with which we were received was everywhere the same, but in Victoria every one joined in doing the honours of a capital famed for the magnificence of its public receptions and for the urbanity of its citizens. Above every other Canadian city, Victoria is English in manners and appearance, and as it is a place of high antiquity as Western cities go, it enjoys a reputation for established culture and politeness which its leading citizens show no disposition to forfeit. There is an Indian legend that God's country lies beyond the Rocky Mountains, and though the saying may read either way—and I should maintain that either interpretation could be verified (as I have written this book to prove)—still I am forced to record that I never witnessed kindness lavished on strangers with such fervour as it was lavished on the "British Editors" at Victoria. I am quite conscious that their welcome did not entirely originate in pure altruism. The principalities and powers of Victoria, state and municipal, looked upon us as important visitors. No province of the Empire has suffered more from neglect by the Mother Country than British Columbia. Its great natural wealth is only known to the small handful of colonists. British Columbia has a claimant grievance hard to bear—that of the unknown genius, obscurity, and patient merit has been its bitter lot for half a century. The arrival of a dozen representatives of British newspapers was an opportunity of getting the poten-

tialities of the province proclaimed throughout England such as had never occurred before, and all put their heads together to turn the incident to the best account.

Industry and Shipping.

As it was dusk when the steamer of the Canadian Pacific Navigation Company was berthed in the harbour, we saw on the evening of our arrival little of the architectural and scenic wonders of the far-famed capital of British Columbia. The whole of Thursday, September 4th, was consumed in sight-seeing in and around the city; but so many are the attractions of Victoria that a day, or several days, far from sufficing to exhaust a place so plenteously endowed with charms, would no more than enable a stranger to find his bearings and learn the lie of the land. In America, if not in England, the praises of Victoria have been sung in prose and rhyme, and few cities possess a situation which it would be harder adequately to extol. Although Government Street has numerous fine shops and imposing business blocks, the streets are in no way remarkable, but the garden portion of the town is delightful. The Parliament Building is deservedly the citizens' pride. It is admittedly one of the handsomest edifices in North America, and though neither so large nor reared on such a commanding site as the picturesque pile of the Federal Houses of Parliament at Ottawa, it struck us as being, for the chamber of a provincial legislature, an exceedingly formidable rival. The verdure of the spacious lawns, amidst which the building stands, amply isolated from

PARLIAMENT BUILDINGS, VICTORIA.

meaner structures, testified in September to the ever-green geniality of the climate.

Outside Victoria an unlovely patch would be hard to find. Cedar-clad isles, aligned with the rocky promontories of Vancouver Island, fringe the coast, diversified here by deep winding inlets and there by capacious bays. On the south and west are the Straits of Juan de Fuca and the Pacific Ocean, and on the east is the broad Gulf of Georgia, a sea-like expanse of intensest ocean blue. To the near beauty of its own romantic landscape Victoria commands the added grandeur of a distant prospect unsurpassed in our terraqueous sphere. From Beacon Hill, one of the public parks, from every other eminence in the vicinity, and from the open waters of the Gulf, can be seen towards the south-east the long dentate chain of the Olympians, and to the east the lordly dome of Mount Baker, capped with eternal snow. The flora of Vancouver Island was more diversified than anything we had yet seen in Canada, and to the wealth of indigenous species the passion of the people of Victoria to have everything home-like has added a profusion of the plants of the British Islands. The similarity of the climate to the south of England has made this a simple matter. About Oak Bay, another public park—as if the whole island was not the most glorious public domain in the universe—we saw the broom "wave its tassels o'er the lea," and fervent Scottish emigrants have introduced the bell and the cross-leaf heather. "There is not an English garden flower," said one of its citizens to me, "which we have not in our gardens, and roses bloom right on to Christmas. I plucked them in my own garden last

Christmas Day." In addition to these the Victorians have many beautiful indigenous flowering shrubs, one of which—which I took to be a Viburnum—makes a grand show in almost every garden. It is the gayest flowering shrub I have ever seen. Among the native trees which gave me pleasure was the red-stemmed arbutus, which often grows in solitary clumps at the top of the cliffs.

Although the fact of its being the capital of British Columbia confers additional importance upon the city of Victoria, it is a mistake to suppose, as many people do, that it is of no consequence as a commercial and industrial city. Among Canadian seaports Victoria ranks second in importance to Montreal. The entries and clearances of sea-going vessels more than double those of its great trading rival Vancouver, and it is the headquarters of the important seal-fishing industry. When we were there the sealers were laid up in the harbour—trim lugger-rigged craft that added a quaint feature to the shipping in the docks. Victoria is the first and last port of call for all vessels in the Japan, China, and Australian trades, and Victoria is the headquarters of quite a fleet of passenger steamers for the Yukon and Alaska, for Seattle, San Francisco, and Southern California. Both Victoria and Vancouver have regular maritime intercourse with the whole Pacific coast from Behrings Straits to the Falkland Islands. In addition to that there is never a season but quite a number of big "windjammers" perform long voyages round the Horn between England and British Columbia. About a couple of miles to the south of Victoria is the naval station of Esquimalt, the most westerly

BRITISH NAVAL STATION, ESQUIMALT.

outpost of the British Empire. Victoria has a population of somewhat over 20,000, but population is no index to real importance in this part of the world. The trade of Vancouver Island itself would suffice to make Victoria a stirring place of business. The island is almost as large as Ireland ; it is one of the chief seats of the lumber industry, is the principal seat of coal-mining, and is rapidly becoming an important field for copper- and gold-mining. But, save lumbering, all its industries are merely in infancy. The real greatness of Vancouver Island is in the womb of futurity. Dense forests cover its fertile valleys and sunny hillsides, and its highly mineralised mountains have merely been scratched.

Mineral Resources of the Island.

In order to convey to our minds some idea of what the budding industries of Vancouver Island are, the Provincial Government projected a trip by land and water, memorable if only for the ineffably beautiful scenery amidst which we roamed and cruised about. The event was looked upon in Victoria as one of historical significance, and on that account I must treat it with some detail. We left Victoria at night on board the steam yacht *Yosemite*. After breakfast on the following morning we stepped on deck to find the *Yosemite* moored at the Crofton wharf, with the little Lenora-Mount Sicker Railway train lined up alongside. "The steam whistle of the Smelter blew a blast of welcome," so writes a local historian, "but time pressed if the lengthy programme of the day was to be carried through. The seeming impossible grades that the powerful little geared engine

surmounted with ease, the unaccustomed forest track, the view from the summit of Mount Richards of the Westholme and Somenos valleys with their cosy English ranches, and then the rapid descent of some 600 feet in less than a mile by the famous switchbacks, drew forth unrestrained wonder and appreciation. Then the long 1,400 feet pull up Mount Sicker, the lovely vistas of scenery caught as the train laboured along the track hewn for it through the mighty forest, the expansive and often awe-inspiring panoramas spread out below as it climbed some dizzy height a thousand feet above the river in the valley beneath, and in particular perhaps the conspicuous engineering skill which had overcome such tremendous natural obstacles to the building of a railway line, elicited a running comment of admiration which not even the flying cinders and the smoke from the hard-worked engine could in any way check.

"Arrived at the mining camp, Mr. Henry Croft showed his visitors round the Lenora mine and explained all he could in so short a time about the bewildering beehive of industry. Of the great Lenora dump of 40,000 tons of ore ready for the Crofton smelter the press men had ocular demonstration ; and their trip into the bowels of the earth evidently excited vivid interest. Above, below, and around, strenuous work day and night was being carried on, and probably at no distant time not only the small area the visitor could observe, but the whole mountain, and the neighbouring Mount Brenton as well, would be just as busy a scene of industry."

As a matter of fact mining development had not

proceeded so far as to create a profound impression. On the hill-top, 2,500 feet above sea-level, we found a little town, and an elegant log-built hotel, the Mount Sicker Hotel, commanding views which even in Switzerland might be famous. We were shown over the workings by Mr. Croft, an English gentleman, who (unless I was misinformed) owns the mine, the railway, and the whole undertaking. The Lenora is one of the finest properties in Vancouver Island, and is now being worked at a profit. When the lode was first discovered an English company acquired the mine; but after a year or two flung it up in disgust, thinking that a property in such a situation could never be worked at a profit. Mr. Croft took over the location, lives upon his property and has made the mine yield copper and gold to pay for the railway, development work, and plant.

The ore body of the Lenora Mine averages from 20 to 50 feet in width; the ore is a pyrites, containing an average of 8 per cent. of copper and about 5 dollars of gold to the ton. It is said to be the first mine which shipped copper from this district, having shipped some 30,000 tons of ore during the past two years. The Lenora property is typical of the mining conditions of British Columbia. Its present promising condition is entirely owing to the enthusiasm of the owner, which has surmounted every obstacle which Nature could place in the way of development. In the hands of an absentee board of directors in London such a property might have little chance to succeed, but will reward the patience of a practical mining engineer who devotes his whole attention to the work of development, and while recoiling from

no engineering schemes, however difficult, studies economy at every point.

Vancouver Island abounds in low-grade copper and gold deposits; but here, as elsewhere, in British Columbia, immense difficulties must be surmounted before they can be turned to account. The work of development will be slow, but the reserves seem to be inexhaustible. The erection of smelters at convenient points for shipment along the shore, which is now proceeding briskly, will effect a great saving in treatment, and co-operation in other respects among the various properties may still further help to promote the industry.

It is only within the past few years that lode mining in Vancouver Island has emerged from the tentative stage. The greater part of the island consists of rugged and lofty volcanic mountains, heavily timbered, and well-nigh impassable. The forest vegetation frustrates the work of the prospector, who has often been indebted for a discovery to the chance uprooting of a tree by the wind, when the up-torn roots lift the soil from the rock and reveal its mineral composition. It was in this way that the existence of whole mountains of low-grade copper ore was at first discovered. The lumber here is far too valuable to allow the prospector to resort to his favourite device of setting fire to a whole mountain-side to facilitate his operations.

Even when ore bodies are located, and the existence of pay ore in abundance is placed beyond the shadow of a doubt, almost insuperable obstacles lie in the way of development. This is true of almost the entire surface of British

Columbia, and accounts for the slow and often unsatisfactory progress of mining operations all over the province. Mixed sulphide ores, of low grade in the majority of cases, are found in vast deposits in many parts of the province; but they are invariably almost inaccessible, and successful development is dependent upon the construction of railway facilities. Nothing more forcibly attests the daring spirit of enterprise of British Columbia than the engineering triumphs which have brought railways for thousands of feet up among the mountains of Vancouver Island and the camps of Rossland and Boundary Creek. In some cases those railways are private property, the cost of which has been defrayed out of revenue from the mines; in others they are owing to the foresight of the Canadian Pacific and other railway companies, which are certainly entitled to praise for enterprise in this part of Canada.

We should have been content to linger at the top of Mount Sicker—as indeed anywhere in Vancouver Island, oblivious to the serious business of our mission—but the cry was soon "All aboard!" and our little locomotive plunged down the steep descent around the skirts of the mountain and into the dark shade of the giant firs and cedars. At the foot of the hills a special train was waiting to convey us to Chemainus along the Esquimalt and Nanaimo Railway, the only railway as yet constructed in the island.

CHAPTER XVI

FOREST WEALTH OF CANADA

AS every one has read of the "backwoods" of Canada, and as Canadian lumber is celebrated all over the world, some of my readers may be surprised that I should have conducted them over the continent from the Straits of Belle Isle to the Pacific Ocean without saying a word about the logging camps, the jambs and rafts, the saw-mills and pulp factories, which the traveller encounters all along the great waterways from the gloomy Saguenay to the estuary of the Fraser River. Those who have never visited Canada, the land of the maple, the elm, the pine, and the hemlock, may be still more surprised to learn that although evidences of forest wealth meet the eye of the stranger wherever he goes, one may now journey for four thousand miles along the highways of trans-continental travel without beholding a single clump of primeval forest, or any vestige, save blackened giant stumps, of that majestic sylvan growth which, when the white man disputed possession with the moose, the elk, and the Red Indian, stretched in one unbroken ocean of green foliage from Hudson Bay to the Gulf of Mexico.

Even where the railway crosses the Rocky

Mountains, the present forest vegetation is chiefly second growth. Most of the original forest has been felled or consumed by fire. For every one of those noble trees which it took the winter snows and the summer suns of three or four centuries to bring to maturity, hewn down for the use of man, two, or probably more, have been burned out through the carelessness of those who light camp fires, or as the result of sheer vandalism or short-sighted cupidity. Thousands upon thousands of acres of lumber have been wantonly burned out by prospectors alone.

These men live among the mountains for weeks at a time, camping out in the solitudes, navigating the rivers in an Indian canoe, scouring the valleys on the "hurricane deck of a cayoose"—by which is meant the hardy breed of Wild West horses—or scaling the heights, hammer and pick in hand, wherever the rusty weathering of an "iron capping" indicates the possible existence of ore. Nothing thwarts the prospector's operations so much as the bush. Baffled in his search to locate the lode upon a hillside, from the streams of which the Indians have brought him native copper or gold, the prospector stealthily fires the forest and decamps, returning later on, when the fire has burnt itself out, to resume exploration untrammelled by the vegetation.

The destruction of timber by fire is still proceeding in British Columbia. Thousands of acres are yearly consumed, and so accustomed are they to the sight, that bush-fires give the inhabitants little concern. Sometimes for miles along the railway we looked out upon a dreary, blackened waste, the gaunt, limbless

stems of once umbrageous firs and cedars standing like spectres in a land of desolation. Right up to the mountain summits, far as the eye can reach, the charred forest extends, a painful and saddening sight to every lover of Nature, and a picture of deplorable loss and ruin to the unsentimental business man. Every succeeding autumn the work of fire-devastation is resumed.

From the blasted scenes of the conflagrations of past years the traveller passes into the raging bush-fires, and the smoke-clouds of the fires of the passing hour. By day the prospect is often obscured for miles by the dense volumes of smoke that fill the valleys; and by night we occasionally beheld the lurid flames leaping up the hillsides, the resinous boughs crackling and roaring above the din of the locomotive and passenger car. All around Vancouver City the smoke of bush-fires may be seen every day, but so impotent are the authorities that, although fully cognisant of the irreparable loss that is being inflicted, the law remains a dead letter; and as there are so many transgressors and it is extremely difficult to bring individual culprits to book, none dares enforce the penalties the statute enjoins.

In the Eastern Provinces the reserves of native timber are far removed from the large cities, from the centres of population, and the trunk railways. When Jacques Cartier, the mariner of St. Malo, climbed the hill from which Montreal takes its name, and, first of Europeans, looked out upon the unrivalled prospect of broad plain and winding river which each succeeding generation extols in loftier phrase, he beheld the greatest forest of elm and

FOREST UNDERGROWTH IN BRITISH COLUMBIA.

maple which ever adorned the face of this planet. That great hardwood forest has vanished for ever. The living generation knows nothing of those stately elms and giant sycamores; their place has been taken by busy streets and wharves, by tall cathedrals, spacious hotels, and imposing colleges; and apple-farms, planted in trim rows, have replaced the groves of birch and lyriodendron which supplied to the Indian the materials to construct his wigwam and canoe. But far to the North the virgin forest extends over unmeasured belts of spruce and pine and tamarack, and for centuries to come Canada can draw supplies of commercial timber from the trackless shades of Northern Quebec, Ontario, and Keewatin, from untapped reserves stretching from Labrador to Athabasca.

In British Columbia it is otherwise. "The forest primeval" is everywhere. The cities are situated in mere clearings, and it is only along the railways and navigable rivers that the original timber has been worked out. It was a great disappointment to me to find that, beautiful as the second-growth forest vegetation is, one may cross Canada without ever seeing a really big tree; but once over the Rockies, you get them to your heart's content. And in my opinion—of course it is a mere matter of taste—these big trees are the most beautiful things in Canada.

I think all the American poets have been of that opinion: Longfellow certainly was. The author of "Hiawatha" never tired singing of the forest life of his native land—"all its mystery and its magic"; and all that mystery and magic cast their glamour upon every man of sense and feeling the moment he

enters those silent, untrodden glades, inhales the balsamic odours of the pines, and ponders on the long ages of summers succeeding summers that the tall, leafy spires have basked in the tranquil airs and unclouded suns of the lone lands of the far Pacific shores.

Visit to a Logging Camp.

In the end of the preceding chapter our party had arrived at Chemainus, known in every quarter of the globe to which sailing-ships convey the far-famed Oregon Pine. In Canada, as in the United States, everything is greatest in some particular line of distinction, and the saw-mills of the Victoria Lumber and Manufacturing Company, Limited, at Chemainus are, I believe, the largest upon the Pacific coast. This is no mean distinction in a saw-milling continent, but British Columbia probably possesses within its limits larger unbroken areas of primeval forest suitable for commerce than any other country in the world. Like every other town in Vancouver Island, Chemainus is beautifully situated. It nestles among wooded bluffs that abut on the blue waters of the Gulf of Georgia, and has a deep, still harbour, where ships berth securely hard by the saw-mills, loading lumber for Europe, Australia, Asia, and South America. Chemainus is connected with Victoria by rail by the Esquimalt and Nanaimo Railway, and along the line are some of the most charming farm-lands in Vancouver Island. The fields are surrounded by the sombre woods, and the cattle may be seen browsing among the huge stumps of the recently felled forest.

The Lumber Company have constructed a rail-

way from the shore right into the heart of the hills, and as the timber is worked out the railway follows the logging camp. An elegant parlour-car was hitched on to the mountain-locomotive, and away

VANCOUVER ISLAND SCENERY.

we sped far into the depths, or rather high up the steeps—the Douglas Fir flourishes up to an altitude of 6,000 feet—of the zone of pines. Miles upon miles, and still we rolled past the stumps and the small trees. But the small trees of British Columbia are no mere wands. They would be giants in Eng-

land, for here it is the practice only to fell trees over two feet and under seven feet in diameter. Openings might be seen here and there where a few wooden "shacks" showed signs of habitation, and industrious Chinamen were occasionally observed clearing patches for cultivation. They are the market gardeners of the island.

At length, thousands of feet above sea-level, we entered the lumbermen's camp, amidst the expansive shade of the prodigious firs and cedars. Huge logs lay procumbent on every hand, from forty to fifty feet long, and from four to seven feet in diameter; the ring of the woodman's axe and the subdued murmur of his long cross-cut saw might be heard breaking the silence of the outraged forest.

Now for the great object of our visit, to see what even few Canadians ever see, the lumbermen actually at work felling the monarchs of the forest, hoary with age long before Columbus crossed the Atlantic! There they stand, mantling the mountain brow, so thickly studded that the eye can seldom pierce their shade for upwards of a hundred yards, towering two hundred to three hundred and fifty feet in height, their noble trunks from six to twelve feet in thickness. There is little else to be seen but a rough railway track laid on the mossy ground and a powerful traction engine at work hauling the mammoth trunks, when felled, with a steel hawser into position for loading on the railway cars.

As soon as the hawser is taut, the ponderous log, twenty to thirty tons in weight, crashes through every obstacle, ploughs through hummocks and sandbanks, and is swung upon a level platform where the steel hands of a derrick lift it with

FELLING A DOUGLAS FIR.

unerring precision upon the freight-car as though it were an ell-wand or a desk pencil. The visitor is struck dumb with amazement at this triumph of steam power and mechanical ingenuity in the remotest solitudes of Nature.

But although machinery and steam-power do everything after the tree is felled, the first operation of all is still achieved by sheer force of human muscle. The brawny arms of the woodmen bring the forest monarch to the ground. I felt quite proud to be introduced to a couple of these stalwart specimens of Canadian manhood before they proceeded to give us an exhibition of their prowess and skill. They were powerful fellows, each six feet in stature, bronzed with the western sun, arms and shoulders like Hercules, the sinews on their forearms like the fibrous roots of the cedar.

They first made a couple of incisions on opposite sides of the trunk, about eight feet above the ground, into which they inserted two springy planks to stand upon, while, by alternate strokes, they swung their ponderous axes deep into the body of the stem. In less than half an hour a gaping notch on one side of the tree, that on which it was intended to fall, proved the stuff of which the loggers' muscle is made. Every blow resounded through the forest, but never a branch moved or a needle quivered among the foliage of the doomed pine far overhead.

The axe-cut notch having been hewn out to their satisfaction, the woodmen drew breath. Then, leaping again upon their slim platform, they applied the cross-cut saw at the opposite side. With long, measured stroke the sharp teeth of the steel band

sank deeper and deeper into the core of the massive stem. The tree was a giant Douglas Fir, 230 feet in height, as subsequently measured, and 155 feet from the point where the trunk was sawn through to the limbs. It had a diameter of 45 inches. For twenty minutes the strenuous labour went on, and not the faintest motion could be detected among the boughs above.

The woodmen can determine to a foot the spot where the tree will fall. They saw through the trunk to within a couple of inches of the notch first hewn out of the side opposite to that where they apply the saw. Then, with a few tremendous blows, a wedge is driven into the cut made by the saw, and all stand back to behold the mighty crash. Slowly, insensibly at first, the noble pine inclines ; then, while we held our breath and felt a chillness in the blood, we saw the tall stem sway over with fast-gathering momentum, until, with a thud that made the earth and the rocks resound, that awakened the echoes in the deepest recesses of the forest, it fell prone to earth, bringing down from the branches of the surrounding trees an immense shower of wreckage, that for several seconds seemed to darken the sky.

The woodmen received our praises and congratulations with modest complacence, but were evidently disappointed that there was not just at hand a tree of some twelve feet in diameter upon which they could have given us a better show. This one was good enough for us. It had braved the storms of 230 winters, and, sentimental as we were, its overthrow for the vulgar uses of man filled us with sadness. The felling of another stately specimen

LOGGERS PLYING THE HAND SAW.

made us still more dejected ; but presently our vivacity was restored by an exhibition of "skidding" logs down the mountain-side.

The lumbermen's methods are not identical in every province of Canada. In the Chicoutimi and Lake St. John districts of Quebec, and in Algoma, Ontario, the timber is mostly cut during winter, when the logs are easily hauled over the snow and deposited at the edge of the streams, along which they are floated down when the ice melts in the spring. In British Columbia log-cutting proceeds briskly all the summer, and the logs are generally transported to the saw-mills by rail. At Chemainus, Comox, and Burrard Inlet, railways have been run right up the mountain slopes, and logs felled on the heights are brought down skids between the rails at the tail of an engine, down gradients sometimes of fourteen to a hundred, at a pace of ten miles to the hour. Six or more logs, each forty feet long, and averaging five feet in diameter, are brought down at one haul, lashed end to end by steel dogs. The whole comes thundering down like an avalanche, and the wonder is that the little locomotive never gets out of control.

The type of locomotive, which is known as the "Shay," is most ingenious. These mountain engines are, I believe, an American invention, and are built at Lima, Ohio. The engines are geared with bevelled wheels, every wheel is a driver, and the coupling is flexible, so that while turning a curve—and these railways are looped in the most amazing fashion—the driving is kept up at full speed. Outwardly they are like colliery "puggies," but up an incline of ten to the hundred these power-

ful little locomotives will tug an immense load without diminution of speed.

To the old folks at home in England, life in the backwoods is a synonym for banishment and barbarism. This must be taken as another instance of that ignorance of Canadian affairs of which Canadians so bitterly complain. The English conception is utterly erroneous. To young men, fond

ELK HUNTERS IN THE FOREST.

of an open-air existence, the life of the log-cutter is an ideal one, and the occupation is one of the most popular in Canada.

The pine woods are health-giving in themselves; bracing air, the nature of the work, the comfortable shanties and ample table provided for the shanty-men, the rafting of the logs, the return to town life with large arrears of undrawn pay, the interludes of

hunting and fishing, and all the exciting incidents of wild life in the forest, appeal to men whose tastes disdain the more prosaic labour of the farm or the factory. The forests of Vancouver Island teem with pheasants, and all day long the song of birds, the tattoo of the woodpecker, and the shrill piping of the squirrel make the woodlands ring. The rifle is often brought out to hunt down the black bear and the panther, for every skin of which the Government pays a gratuity.

Chemainus Saw-Mills.

The saw-mills and loading wharves at Chemainus form one of the sights of Canada. Most of the machinery in a Canadian saw-mill is similar to that in England, but out here they have appliances for handling the rough logs which fill every one with amazement. As a general rule the logs are brought to the mills by water, and a single jamb or raft is sometimes a mile in extent, and contains several millions of feet of lumber. Everything is done mechanically. The logs are raised from the water up an inclined plane, upon which moves an endless pulley, studded with steel teeth, and delivered upon a moveable platform running parallel to a stupendous circular saw.

The monster log, dripping with brine, is slowly lifted up the gangway. As it projects through the doorway at the extremity of the bay it seems to darken the building, its huge bulk excluding so much light. No sooner is the log delivered upon the moveable table than two immense grappling forks, like Titan hands of steel, sling it into position

facing the circular saw, one of the sawyers pulls a crank, and the platform upon which he stands rushes madly forward, carrying the inert mass, automatically focussed to the nicety of a line, against the teeth of the rotating steel. A deafening screech, the torture of a few seconds, and the "back" is severed from the log. The platform darts rapidly too and fro, the sawyers, strong of hand and of eagle eye, flit along with it. Never before in my life had I witnessed such strength and expertness. It is like men toiling incessantly upon some colossal moving shuttle, and in a few minutes' time the rough-barked log has been hewn into a score of planks, which the eye can hardly follow as they travel along to be still further split and dressed into deals.

At the work above described expert sawyers can earn £1 and upwards a day, but only smart and agile men are fitted for the task. Chinamen do most of the less responsible work—I am here speaking of Chemainus—and a great many of them seem to be employed at this mill. The bays and timberyards are of great extent, and all the machinery is of the most modern description. At the end of the yard ships are loading the dressed timber—full-rigged 3,000-tonners, barques, and four-masted schooners; and the day we visited the yard ships were loading for Liverpool, Panama, Melbourne, and the Cape. As showing how the lumber is distributed, we were told that one week last season vessels had cleared for Calcutta, Shanghai, Tientsin, the Cape, Liverpool, Sydney, and Geraldtown, in Western Australia.

Some particulars about the Victoria Lumber and Manufacturing Company will illustrate the profitable

nature of the lumber industry. This company, for one initial payment of $5 per acre, acquired the licence for twenty-one years to hew the timber of 122,000 acres. At the minimum computation, every acre will yield 30,000 lineal feet board measure—1 inch thick, 12 inches square—but it is nothing uncommon to get 200,000 feet upon an acre, and sometimes the yield per acre is as high as 500,000 feet. The average selling price is $5 per thousand feet, and this company's production last year for export amounted to 25,856,316 feet. All this was Douglas Fir—the so-called Oregon Pine—this company reserving the cedar and other woods on its property for the present. The capital of the company is $1,000,000, and I was told that it could not now be bought out for $2,500,000.

Although the Chemainus mills have the largest production, they are not much in advance of the Hastings mill at Vancouver, belonging to the British Columbia Mills, Timber, and Trading Company. This company last year exported 23,929,274 feet. The following table shows what were the total shipments from the Gulf of Georgia ports last season and the destinations of the cargoes, the quantities being given in feet, board measure :—

Destination.	Quantities.	Value.
United Kingdom and Cont. of Europe	10,256,467	$155,417
Australia	22,104,285	187,342
South Africa	4,717,054	42,636
Peru	3,644,120	32,913
Chilé	8,610,660	82,843
China and Japan	13,178,890	135,362
India	3,036,539	28,394
United States	170,260	1,447
Total	65,718,275	$666,354

Economic Forest Trees.

The two trees of greatest economic importance in British Columbia are the Douglas Fir, known in commerce as Oregon Pine or Red Fir, and the

GLADE OF DOUGLAS FIRS.

Great Cedar, commercially called the Red and sometimes the Yellow Cedar. The so-called Oregon Pine is best known in England, but as the statistics prove, Australia is far and away the most important market. The term Oregon Pine is a characteristic

commercial misnomer. In the state of Oregon it is being rapidly worked out, and the tree is not a pine, but a true fir. Botanically, it is known as *Abies Douglassii*, and for its supplies of this invaluable timber the world must henceforth mainly depend upon the dense forests of British Columbia.

The coast ranges, the Cascade Mountains, the islands, and the inlets on the mainland are its favourite habitat; and so vast is the acreage ascertained by the surveys of the Dominion Forestry Commission to be covered by this superb conifer, that even if the present annual output were trebled, and an allowance of 50 per cent. be made for destruction by fire—an allowance which experience shows it imperative to make—it would take sixty years to work out the ascertained acreage. At present only about one-third of the limits of the province is taken up, and it is estimated that these will be worked out by the companies now in operation in twenty years.

A common object adjoining a British Columbian farmhouse is a clump of Douglas Firs standing in the open. In such a situation the whole character of the tree is transformed; the enormous limbs, draped in deep, green, glossy fronds, droop to the ground, spreading as ample a shade as the noblest of the far-famed beeches of Denmark. But in the forest the tree grows without branches, except at the top, yielding timber of immense size and strength, destitute of knots, and particularly suitable for bridge-building, house-building, wharves, piles, masts, and furniture. No other timber is put to more varied uses. It is the chief timber used for

the building of the wooden bridges and wooden sailing ships of America. So dense are the forests that as much as 508,000 feet have been cut off one acre in Vancouver Island.

Next in economic importance to the Douglas Fir is the Great Cedar—*Thuga gigantea*. The celebrated "big trees" in Stanley Park, Vancouver Island, are specimens of this species. Though of less lofty stature, the dimensions of the trunk frequently exceed those of the Douglas Fir. It is a more ornamental wood, and is mostly used for interior furnishings, cabinet-making, doors, and "shingles." Almost all the houses in Western Canada and the Western states are roofed with these "shingles," which constitute an important manufacture in Vancouver.

I can merely enumerate the other forest trees of British Columbia. The Yellow Cedar, or Cypress—*Thuga excelsa*—commands a great price as a furniture wood, owing to its close grain and high susceptibility to polish; it also forms a grand forest tree, 6 feet in diameter frequently; but its range is more restricted than that of the Douglas Fir and the Red Cedar. Of commoner distribution and wider range, forming forests over great areas of the mainland still untouched, are the hemlock, the balsam fir, the bull pine, the tamarack or western larch, and the broad-leaved maple.

Although the cedars and Douglas Firs are the trees of greatest economic importance to British Columbia at present, and the coast forests where they grow are the only ones likely to be worked for some years to come, they by no means exhaust the forest wealth of this province. The big trees form

a mere littoral fringe. In the central region between the Cascades in the West and the Rocky Mountains in the East, over an area 770 miles long and 300 miles broad, is a solid forest of spruce, black spruce and white spruce, perhaps the greatest

VANCOUVER ISLAND: INTERIOR RIVER SCENE.

preserve for the pulp industry which the world contains.

Moreover, this spruce forest passes beyond the bounds of British Columbia. It extends down the Peace River into the little-explored plains of Athabasca, its range being only bounded by the Barren

Lands of the Arctic and the central wheat-growing steppe, which, as I have explained already, is destitute of forest vegetation. In the prairie trees are confined to the creeks and river bottoms, and are of no great economic significance. The chief species are Manitoban poplar, or cotton-wood, Western birch, and tamarack.

Hitherto the staple article of the timber trade in Eastern Canada has been the white or Weymouth Pine, the most useful of all pines for common lumber. In innumerable mills it is manufactured into structural woodwork for houses, flooring, doors, window-frames, &c. New Ontario will for years to come be the chief producer of this serviceable cheap timber for all the North American Continent. Though the conifers — firs, pines, cedars, and cypresses—constitute the preponderating factor in Canada's forest wealth, they are not the whole. The maple, the elm, the birch, the oak, and the walnut diversify her sylvan scenery, often form extensive hardwood forests, and afford materials for a furniture-making industry, which gains increasing importance every year. In some of the Eastern mills one may see the whole process of manufacture, from the raw log to the polished cabinet, from the floating jamb to the decorative furnishings of a drawing-room.

The harvest of the forest, so far as export trade is concerned, ranks third in value in the products of Canada, taking precedence of agriculture. The exports for 1901, without including wood-pulp and many manufactured articles, were valued at six millions sterling, or $30,009,857. The following table shows the aggregate value of that year's

exports of the chief natural productions of the Dominion :—

	Dominion Currency.	Sterling Equivalent.
Animals	$55,495,000 ...	£11,099,000
Mines	40,367,000 ...	8,073,000
Forests	30,009,000 ...	6,002,000
Agriculture	24,781,000 ...	4,956,000
Manufactures	16,012,000 ...	3,402,000
Fisheries	10,720,000 ...	2,124,000
Total	$177,431,000 ...	£35,500,000

The wood-pulp industry has come into great prominence in recent years, and has conferred immense value upon the second-growth forests of spruce which abound in every province of the Dominion. Quite a large number of United States companies have engaged in this manufacture, which, owing to the existence of inexhaustible water power everywhere, is highly lucrative, and some of the largest pulp-mills in Canada are owned by Americans. A similar remark applies to lumber factories and saw-mills, numbers of which have been erected by United States capital along the Canadian shores of Lake Huron and Lake Superior. The Dominion regulations for obtaining timber leases are as generous as the land settlement laws.

CHAPTER XVII

THE "NEWCASTLE OF THE PACIFIC"

OUR visit to the logging camp and saw-mills at Chemainus tempted me to interrupt the progression of my narrative with a digression into which I have tried to condense much that we saw of the lumber industry at many points from Quebec westwards. So much time had been consumed in the woods that our plans were modified. The majority of the party, including all the ladies, went on board the *Yosemite* to steam north along the shore to Nanaimo, but "the special guests" (to quote the local historian of the trip) "along with the Hon. Col. Prior, the Premier, and the Hon. W. C. Wells as representatives of the Government, went by quicker special train to Nanaimo to be shown round the town by the Mayor and the Board of Trade, and through the coal-mines by Mr. Robins, of the New Vancouver Coal Company."

The "Newcastle of the Pacific," like every other town in Vancouver Island, is finely situated; but here may be seen what one may travel a thousand miles in Canada to see—the sun obscured by smoke. 'Twas a homely and familiar appearance, but I cannot say that it gave me joy. After the sunshine

of the Prairie, the Rocky Mountain snows, the green of the forest, and the azure of the Pacific sky and sea, the aspect of industry, as it is known in England, made me sick at heart.

First impressions of Nanaimo are, however, deceptive. A pit-head adjoins the railway station and overlooks the bay, another is situated upon an island some distance from the shore, and the volume of smoke which they were emitting at the time of our arrival was calculated to prejudice our notions of the place. The residential town is built upon the rising ground to the rear of the collieries, and Nanaimo has villas, gardens, and orchards to compare with those of the other favoured towns of Vancouver Island. So far as the mining part of the population is concerned, I have never seen coal-miners so comfortably placed as those of Nanaimo, and I question whether any other pitmen in the world are better off. Their lodging is not in miners' rows. Every miner has his own house and garden, and some of their abodes which were pointed out to me were more elegant and commodious edifices than those of many well-to-do middle-class families in England.

At the station we had the pleasure of shaking hands with Mr. Ralph Smith, M.P., a gentleman who had been one of our fellow-passengers on the *Tunisian*. Mr. Smith is a Tynesider, who forsook the pit in his native county about thirteen years ago. To-day he is one of the Labour Members in the Federal Parliament. If I am rightly informed, there are only two. The other is Mr. Arthur W. Puttee, M.P. for Winnipeg, whom I have already introduced to my readers. Mr. Puttee, who is a

native of Kent, also emigrated to better his fortune only some fifteen years ago.

To both these labour M.P.'s I must express indebtedness for information about the condition of the working classes in Canada. Both are the recognised spokesmen of the claims of labour in the highest Canadian tribunal. It is their business, it may be presumed, to paint the lot of those whom they serve in no rosy light. Mr. Puttee emphatically stated to me that, after making all deductions for the higher cost of articles of luxury and imported manufactured goods, artisans and labourers are better off in Canada than in England, and have, said he, "in every way a better time." It is their own blame if they do not save money; and every man who has the ambition may own his own house and garden, and acquire agricultural land, too, if he wishes it. These remarks do not, of course, apply to highly specialised trades, which are merely in their infancy in Canada.

Mr. Ralph Smith is the strong man whose voice and counsel command the respectful attention of the employers of labour and politicians of the Farthest West, and whose moderation restrains the turbulent floating element of all nationalities among the British Columbian miners. Here he may be a rock of offence to capital: in driving round Nanaimo with me his chief desire seemed to be to show how well off the Vancouver Island miners are as compared with their comrades in England. My own senses told me that.

At the pits of the New Vancouver Coal Mining and Land Company some twelve to fourteen hundred men are employed. Out of its estate the

company has laid off a large area in five-acre plots, which their employés are encouraged to acquire upon easy terms. About one hundred have acquired these five-acre homesteads, which are situated upon the outskirts of the town. The majority prefer to reside within the city limits, where they have lots 66 feet wide by 150 feet long; but all own their own houses, which are self-contained and stand apart. They are roomy dwellings, built, like most Canadian houses, of wood, elegantly designed and roofed with shingles.

Many of those who have taken homesteads, besides having gardens and orchards, have a cow and their own horse and buggy. Probably the Scottish element predominates; but there are miners in Nanaimo and Comox, the other leading mining town of the island, from Yorkshire, Northumberland, Durham, and South Wales. There are also a few Belgians, Italians, Finns, and Frenchmen. Some miners in Nanaimo have been in the place since the first opening of the collieries, nearly twenty years ago. The following are the rates of wages paid, my figures being taken from the report of the Minister of Mines for 1901–2 :—

Character of Labour.	Underground. Av'ge Daily Wage.	Above ground. Av'ge Daily Wage
Whites—Miners	$3 to $5 ...	—
Labourers ...	$2.60 to $3 ...	$2.50
Mechanics ...	— ...	$3 to $4
Boys	$1 to $2 ...	$1 to $1.50
Chinese	— ...	$1.12 to $1.50

Mr. Smith stated that the miners earned on an average $3¼ per day (13s.), but it will be seen from the official statement that an industrious man can

earn £1 for every day he goes down the pit. As the table shows, no Chinaman is allowed to work underneath the surface.

Mr. Smith told me that many miners, those who had anything in them, on coming out to Vancouver became altered men. Their improved worldly circumstances and wider horizon tended to elevate them mentally, physically, and morally; but the empty sort, and these, I gathered, form the majority, who missed the pot of beer at the village "pub." and hankered after the lower classes of "sport" to which they had been accustomed at home, frequently wearied of Nanaimo and migrated elsewhere, for the good of the community. These restless spirits can always find employment upon other "propositions."

In the underground workings, which we were taken down to see, I was greatly struck with the height, good ventilation, and electric lighting of the galleries, but was somewhat disappointed with the pithead machinery, which is not abreast of English practice. I may mention that the English Mines Act of 1888 was adopted by the British Columbian Government about fifteen years ago, and is applicable to-day with certain provincial amendments. The Workmen's Compensation Act was also adopted by the Provincial Government in 1897. It should be added that the eight-hours day is in operation in mines of every description all over British Columbia.

Nature made Vancouver Island a terrestrial paradise, but colliers out here are, unhappily, not exempt from the perils that attend their calling. There are four collieries in the island; their output for 1901 was 1,312,202 tons of coal, and in all they

found employment for 2,985 men, of whom 1,225 were miners working at the face. That year's operations, as shown in official reports, were attended by no fewer than 99 fatalities, but it would be unfair to represent this as an average year's casualties. Two exceptional disasters caused the deaths of eighty men. At No. 6 shaft mine of the Union Colliery 64 perished in an explosion from a cause which could not be determined, and at No. 2 stope mine of the Wellington (Extension) Colliery a fire, supposed to have been caused by the ignition of a curtain, resulted in the fatal entombment of sixteen men. The Vancouver Series of the Canadian geologists has been severely dislocated; the coal seams are extensively faulted, and are liable to gas. The coal measures are stated to be of Cretaceous age.

At Nanaimo the prow of the *Yosemite* was turned eastward for Vancouver City, and the "representatives of the Fourth Estate of the Empire," as one of the journals was pleased to call us, turned their backs upon the setting sun. On our homeward journey our send-off was magnificent. "After business, pleasure! and on the way over to Vancouver the banquet which was served on board the *Yosemite* was the climax to the really splendid arrangements made throughout for the comfort and entertainment of every one on board." For this part of the proceedings the diction of the provincial press is for once utterly inadequate. For princes of the blood a grander feast could not have been spread. But the fare, royal as it was, would not alone have left such a pleasant memory. The feast was leisurely partaken of, and all over the calm, star-lit waters we

had a still more enjoyable symposium of toast and song. Colonel Prior presided, and being an excellent chairman, kept the informal programme going until, a little after midnight, the *Yosemite* arrived at Vancouver landing-stage.

CHAPTER XVIII

VANCOUVER CITY AND ITS INDUSTRIES

LESS than half a century has elapsed since the rush to the Kariboo gold diggings directed attention to British Columbia, and made the name of Vancouver Island familiar to English ears. Before the sixties almost the only symbol of British sovereignty and white man's habitation in these latitudes was a fort of the Hudson Bay Company near the site of Victoria, and primeval forest covered the ground upon which the city of Vancouver now stands. Ten years later only one human habitation bore evidence to the advent of the pioneer, a log "shack," known as Gassy Bill's, William being a "booster," who upon a small clearing on the shore opened a saloon for the accommodation and refreshment of miners upon the trail. In an Admiralty chart about forty years old the site of Vancouver, it is said, is marked as "Gassy-town." Later on the place came to be known as Granville, but Granville must have made slow progress, for in 1886, when it was selected for the Pacific terminus of the Canadian Pacific Railway, its population only numbered fifty souls. For some incomprehensible reason the name was again changed when the first train of the Canadian Pacific Railway came

through in May, 1887; but the selection of a name, which has produced endless bickering and confusion, has not retarded the rapid growth of the now world-famous city of Vancouver.

Gazing from any of the eminences which command Vancouver City and its magnificent natural domain, Stanley Park; beholding the interminable

VANCOUVER CITY AND BURRARD INLET.

water-front and the shipping, now only in the nascent stage; looking across Burrard Inlet, in which the world's navies might find anchorage, to the lofty mountains on the opposite shore which stand sentinel over the scene—while gazing upon this unrivalled prospect of natural loveliness and human industry, one is tempted to conjure up a vision of future wealth and populousness and com-

merce, the mart and rendezvous of every race and tongue. Its situation on the globe has marked out Vancouver for one of the world's *entrepôts*, and Nature has made it one of the fairest spots upon which a great city population could be planted.

To some extent its future is bound up with that of the British Empire. While Canada remains a portion of the Empire, Vancouver will flourish as its leading Pacific portal, and will acquire increasing importance as the aorta through which British trade with Asia and Australia must pass to and fro by the only possible all-British route. A few years ago that through trade was visionary. To-day it exists, if nothing more ; with the acceleration of the railway trans-continental service, and the establishment of fast steamers between England and the St. Lawrence, it will become one of the recognised channels of travel and commerce.

But Canada is fast developing her own resources, and Vancouver will grow in obedience to the requirements of Canadian trade. Hitherto its growth has been almost solely due to the development of local industries. As yet the population is only twenty-eight thousand, but it has doubled within ten years. The city, in fact, is only sixteen years old, and every week witnesses some accession of consequence. The steamers of the Empress Line sail from Vancouver; the Empresses are magnificent boats, but the Canadian Pacific Railway has already found them inadequate, and has decided to build larger vessels for the trade with China and Japan. Vancouver is also the port of departure of the steamers of the Canadian-Australian Royal Mail Steamship Line. These steamers sail monthly

in both directions *viâ* Honolulu and Suva, Fiji. The Canadian Pacific Railway holds a controlling interest in this line, and there is talk of the company placing upon the route new boats of their own, specially equipped for the long tropical sail.

The population of Vancouver is no index to the real importance of the city. It is difficult in such

"WHITE EMPRESS" IN VANCOUVER DOCK.

a town to believe that its population is so small. To judge by the grandeur of the buildings, the size of the shops, the thronging streets, the bustling traffic, the splendid tramway system, the superb public parks, and all the other products of civic life, one would imagine that Vancouver was an industrial centre of probably more than a hundred thousand inhabitants. Indeed, there are towns in Lancashire,

Yorkshire, and the Midlands with populations even exceeding a hundred thousand that have nothing like the magnificent air of the "Bright Young Queen of the West, sunset doorway of the Dominion." It is not necessarily the mere number of inhabitants that makes a town great. Rather is it, I should say, the absence of poverty and the proportion of the inhabitants who are enabled to lead a life calculated to develop all the highest faculties of a man, to satisfy his desires and enable him to lead a life in which there is nothing stunted, impoverished, and an-hungered. These conditions are fulfilled in a remarkable degree in the cities of British Columbia, and nowhere more so than in Vancouver. Every man who has found his way to this Far-western seat of commerce has not made a fortune, of course, but we met a wonderfully large number who a few years ago left England or Scotland as clerks or artizans, and are now in a flourishing condition in Vancouver, doing a big business and living in large residences in the far-extended suburbs.

The Salmon Fishery.

Our first engagement at Vancouver was a run down to Steveston to learn something of the salmon canning industry. We were the guests of the British Columbia Packers' Association, who invited us to visit the Brunswick Cannery, which fortunately, though the fishing season was virtually finished, was still running. As in the logging camp and saw-mills at Chemainus we were amazed at the perfection of the mechanical contrivances employed, so at Steveston we were astonished at the extent to

which machinery has been applied in preparing the salmon catch for the market. In the canneries at the Fraser estuary little is now done by hand save the gutting of the fish and the filling of the cans, the former being mostly done by Indian women and the latter by Chinamen. The Chinese are freely employed at the canneries, and display a deftness and assiduity that could not be too highly praised. The packers are naturally anxious to dispense with as much Chinese labour as possible, not only because the employment of Asiatics in any capacity whatsoever is a constant offence to the Labour Party, the most powerful and turbulent faction in the province, but because of the prejudice in the United States against the employment of Celestials in the preparation of food products. The silliness of this prejudice is palpable to any one who has seen the packers at work, but under any circumstances the cause for its existence will soon be removed. Already at some canneries mechanical gutting and filling machines are employed, and the ingenuity of the firms engaged in making salmon-packing machinery is effecting constant improvements in the efficiency of this class of apparatus. At New Westminster I was shown at the engineering shops of the Schaake Machine Company a new mechanical filler and gutter of marvellous efficiency. In the course of another season or so the Chinese question will be solved by the universal installation of this last link in the chain of mechanical processes in every British Columbian cannery.

Where all the tinned salmon consumed in the manufacturing towns of England comes from I do not know, but I cannot believe that any large

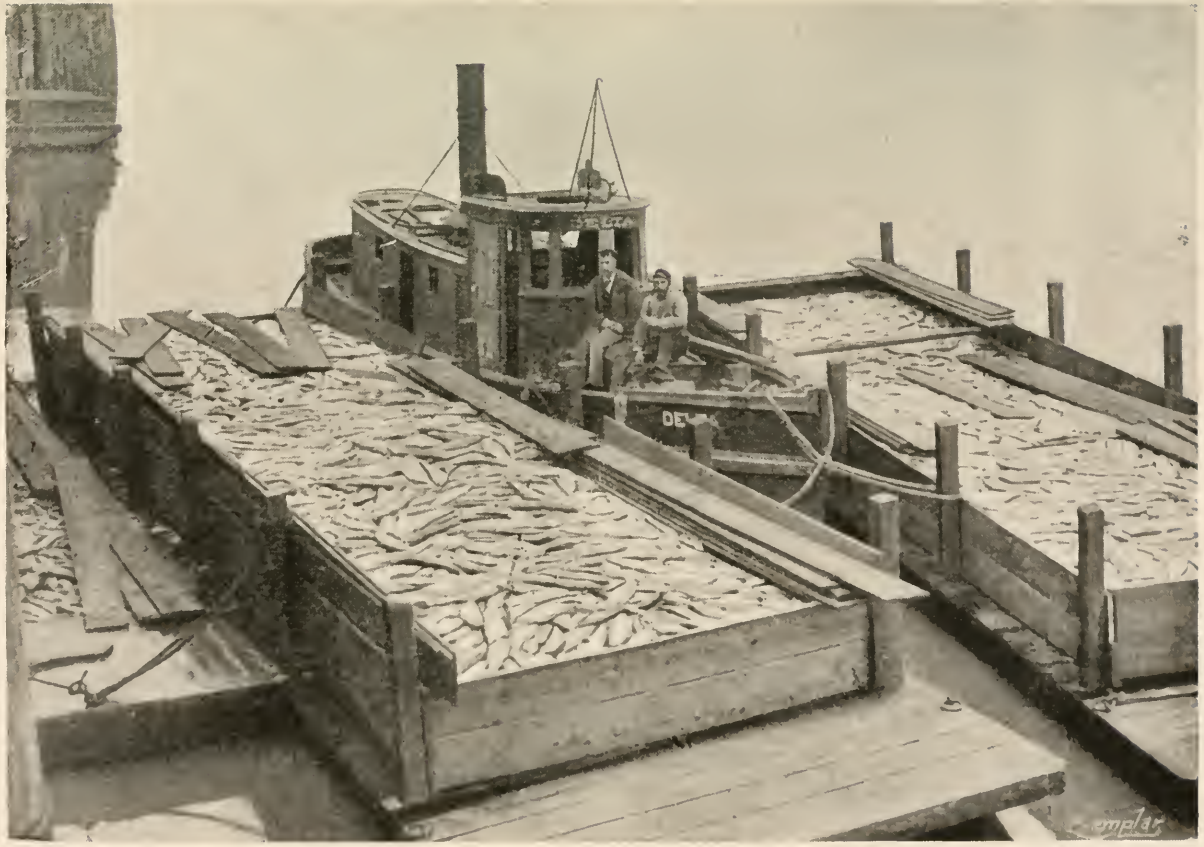
FRASER RIVER FISHING FLEET.

part of it is British Columbian. The Fraser River salmon is packed in much more elegant and expensive tins than the cheaply got-up stuff commonly sold in England. At the Brunswick Cannery most of the fish is put up in handsome 1 lb. tins of elongated form—like coffee canisters—of a pattern seldom seen in England, and the labels are of much more artistic design and colouration than those on the salmon tins commonly exposed in shop windows in British towns. Still, the greater part, nearly 90 per cent., of the salmon canned on the Fraser River is exported to London and Liverpool, and until quite recently nearly the whole pack was brought to this country in sailing ships round Cape Horn. We learned that the greater part of the British Columbian tinned salmon sold in Eastern Canada was till a few years ago transported round the Horn to Liverpool, and thence re-shipped to Canada. That, however, will soon be a thing of the past, as one of the latest developments of the trade has been the shipping by rail of boxes of refrigerated salmon whole to the centres of consumption in the United States and Canada. We were conducted over a large refrigerating establishment for this trade at New Westminster.

The precautions taken to send the tinned salmon from the canneries in a state of absolute purity are of the most elaborate description. The preparatory processes having for their object the expulsion of all volatile and decomposable substances are simple and scientific, though at first sight they seem tedious and prolonged by apparent repetition. The preliminary processes of gutting, cleaning, cutting, and filling having been accomplished, the cans are con-

veyed along a travelling belt into what is called a "topping" machine, a highly ingenious contrivance which places the lids on the filled cans at the rate of a hundred and fifty a minute. Quite a series of machines is then passed through, the "crimping" machine which welds the lids, and the soldering machine which effects the process of soldering. Then a number of devices are employed to expel gas, and to render the canisters air-tight. The cans are not finally sealed hermetically until repeated tests prove that they contain neither atmospheric air nor watery vapour. They are first inserted in steam boxes and raised to the boiling point. On being removed the cans are pricked so that the generated steam may escape. The cooking of the contents is completed by placing the cans in retorts, where they are subjected to a temperature considerably over boiling point for an hour or more. Lastly the cans are lacquered in tanks by the nimble-fingered Chinamen, but even then the process of testing is not complete. In all there are eight systematic tests, to be followed after the lacquering and labelling by a final examination by scientific experts before the cases are packed ready for the market. As a rule forty-eight cans go to the case.

We had not the pleasure of seeing the canneries in full swing. At the height of the season a fleet of seven thousand boats land their catch at the forty-nine canneries along the Fraser River. The fishermen are a motley crowd, including Indians and Chilians and all the other nationalities of the cosmopolitan Pacific slope. No less varied is the nature of the harvest. The Pacific salmon is not only specifically but generically distinct from



CANNERY TUG COLLECTING FISH.

that of the North Atlantic, and there are five well-marked species, the Sockeye, the Quinnat, and the Cohoe being of greatest economic importance. The Quinnat is a salmon of extreme beauty of colouration, silvery scaled like our Salmo Ferox, and of delicate flavour. It frequently attains a great size, specimens of 70 lbs. weight being comparatively common, and this variety is most highly prized among British Columbians. The Sockeye, however, is the staple of the canning industry. It is a smaller fish, and therefore more easily handled, and the bright red tint of the flesh recommends it in the tinned state to the consumer. All the species found in Pacific waters die after spawning once. This fact alone differentiates the genus from Salmo.

The size of the catch is liable to wide variation from season to season, although it is said that every fourth year there is a bumper pack. This would seem to hold good for the Fraser River, where the two heaviest packs on record were those of 1897, 860,459 cases, and 1901, 990,252 cases. Last year there was an immense falling off, and in 1898 the pack fell to little over quarter of a million cases. In the years of great plenty the rivers literally swarm with fish.

Obviously the value of an industry subject to so much variation with the seasons is difficult to estimate. Not only is the pack subject to great variation, but prices are liable to wide fluctuation. For 1900 the value of the catch was returned at $3,391,744, but the pack for that year was a very poor one. Some seasons a larger sum than this has been disbursed among the fishermen who sell the catch at the boat's side. The fish, I should have

mentioned, are caught in the open estuary in drift nets.

The river front at Steveston is a sight which I should not have cared to miss. The arms of the Fraser River delta are broad tidal waters and the banks of the main *embouchure*, on which Steveston is situated, are thickly studded with fishing settlements and canning establishments. The railway trip across Lulu Island presented an opportunity of observing the extent of the fertile alluvium of the Lower Fraser Valley and delta, forty acres of which is declared to be quite a large and profitable farm. A good deal of land has been dyked to keep out the sea and floods, and land of this description, which needs no bush-clearing, is much run after, being exceedingly productive. All the available land has been taken up and cannot now be purchased at less than from $10 to $20. There is land, indeed, in the coastal districts around Victoria and Vancouver which runs as high as $300 an acre in value. Farms which have been in a state of high cultivation for several years and are suitable for creameries, orchards, hop-gardens, and other profitable branches of small culture, have risen greatly in value in recent years, and free land or cheap land cannot now be had near the railways or chief towns. The Lower Fraser Valley is about sixty miles long and from twelve to fifteen miles wide; and when the whole of it is cleared and laid under the exuberant tillage of which it is capable it will be the Egypt of Canada. Much of it is still heavily timbered, and still more is covered with a second growth of fir, birch, maple, and alder.

SALMON PRESSING UP TO SPAWNING GROUNDS, FRASER RIVER.

Vancouver's Splendid Start in Life.

If there was an aspect of life in Canada which I neglected to study it was sport, but it would be a mistake to imagine that in Canada sport occupies a place in the thoughts of the people similar to that which it occupies in England. Public interest in sports and pastimes, so far as the vast bulk of the people are concerned, is languid; men who are making a new country have something else to think about. We had in Vancouver an opportunity to witness a baseball cup tie between champion teams, but I for one preferred to accompany Mayor Neelands in a drive round the celebrated Stanley Park. The "Big Trees," the long shady walks, and the romantic bays of this immense natural domain were as fine as anything I had seen in Canada, and gladly would I have fallen asleep in some one of its sequestered leafy bowers if so be I could have escaped the necessity of ever again returning to the noise, the envy, and the toil of sordid city life. Stanley Park is a clipping of the Pacific shore where the primeval bush has been spared through the accident of the land having been set aside for some military project in the old Crown Colony days. Other cities have fair and beautiful parks, but none that I know of precisely like this. Its charms are twofold—the undefiled primeval flora and the rugged bluffs of its sea-girt boundaries. As in Banff National Park, so here, the wild birds twitter among the branches high overhead, the woodpecker taps the hollow bark of the ancient cedars, and the squirrel gambols and pipes undismayed in the impassable thickets of trail-

ing underwood. How superb is the start which cities like Victoria and Vancouver have made! They have begun where the most opulent cities of the Old World, after centuries of misdirected effort, are fain to end; they can almost without effort and without cost secure what neither municipal enterprise nor private munificence can procure for the anæmic populations of our industrial towns. What a land is British Columbia to reclaim for the uses of man! Here he may plant industry and population amid landscapes of elysian loveliness which it will defy his powers of ruination to deface. The contour of the land and the distribution of water make for ineffaceable picturesqueness, and the climate will for ever defeat the activities of devastation. Here, as elsewhere, man will do his best to "mark the earth with ruin," but Nature, in two of her provinces at least, earth sculpture and plant life, will o'ermaster his powers of spoliation.

At the Lion's Gate the great natural harbour of Vancouver may be said to commence. Within the Gate there is a tidal area with absolutely safe anchorage for vessels of any draught, covering fully thirty square miles. This land-locked roadstead is known as Burrard Inlet. It is a hundred and fifty miles from the open Pacific, and quite invisible until actually entered. The Inlet is secluded among lofty pine-clad mountains, and numerous islands empurple its waters. Upon these float the stately steamers of the Pacific lines, sky-scraping "wind-jammers" in the lumber trade, the big steam transfer-barges that convey freight-cars to and from Vancouver Island, and a great host of miscellaneous fishing craft. Sailers

may be seen bound for England, and passenger steamers setting off for Skagway and the Yukon. Two large liners were lying at the quays, the *Empress of China* and the *Aorangi*, of the Canadian-Australian Royal Mail Steamship Line.

Wealth and Wages.

Labour, as is well known, has usurped in British Columbia a powerful influence in politics. The artisan classes have not failed to secure liberal participation in the prosperity of Vancouver. In order not to convey an exaggerated notion of that prosperity, I may quote the following bank clearings of the city along with the bank clearings of other leading Canadian centres :—

	1898.	1901.	1902.
Montreal	$794,109,924	$889,480,915	$1,089,976,730
Toronto	504,569,918	599,585,671	809,078,559
Winnipeg	107,786,798	134,199,663	188,370,033
Halifax	70,600,705	87,148,064	88,532,252
Vancouver, B.C.	42,179,553	46,738,805	54,223,969
Hamilton	40,298,084	42,554,033	45,970,217
St. John, N.B. ...	32,628,723	40,941,258	42,465,684
Victoria, B.C. ...	33,506,489	30,607,315	28,680,679
	$1,625,680,194	$1,871,061,720	$2,347,298,223

It will thus be seen that in 1902 the bank clearings of Vancouver occupied the fifth position in the Dominion, its proportion being 2·13 of the total. Total clearings of more than ten millions sterling are proof of immense commercial activity in a city of 26,000 inhabitants, and as another indication of well-being it may be mentioned that in 1901 only

102 insolvencies were reported for the whole of British Columbia. The total assessable value of property in Vancouver increased from $2,639,000 in 1887 to $16,512,000 in 1901. This speaks volumes for the activity of the building trades, which are never slack. Indeed, on the main streets unfinished premises were pointed out to us which could not be finished for want of skilled labour. I learned that the following rates of wages were being paid :—

		Equal to
Carpenters	$3.50 to 4 ...	14s. to 16s.
Plumbers	3 to 4 ...	12s. to 16s.
Plasterers	4 to 4.50 ...	16s. to 18s.
Bricklayers	4.50 to 5 ...	18s. to 20s.
Blacksmiths	3.50 to 4 ...	14s. to 16s.
Mechanics	3.50 to 4 ...	14s. to 16s.
Engineers	4 to 4.50 ...	16s. to 18s.
Unskilled labour ...	2.50 ...	10s.
Longshoremen (per hour)	0.30 to 0.40 ...	1s. 3d.

These rates may be higher than the average for the entire year, and it must not be forgotten that some of these trades are liable to interruption during winter. Still the figures might make the mouths of professional men in England water. The average working day in the building and allied trades is nine hours, from 7 a.m. to 5 p.m. The cost of living in British Columbia is higher than in Eastern Canada; but while various natural products, such as fish and game, are very cheap and plentiful, ordinary provisions are no dearer than in England. Excellent bacon may be purchased for 10d. per pound, butter for the same price, cheese for 8½d., and milk for 4d. to 5d. per quart. Beef costs from 6 to 9 cents (3d. to 4½d.) a pound, mutton from 8 to 10 cents, and

pork from 6 to 8 cents. Fowls sell in the market at New Westminster for $6 for a dozen, and ducks for $5 a dozen. Vegetables are about the same price as in England, but fruit is very cheap. Twenty pounds of plums sometimes sell for 1s., and 20 pounds of peaches for 6s. Unmarried working men may get board and lodging at from $16 to $25 per month—say, £3 10s. to £5. House rents are relatively high, married workmen paying from $6 to $15 per month for six-roomed houses; but it must be understood that artisans in Canada have quite lordly conceptions with regard to their domiciles, and their ability to pay £36 of yearly rent should be taken as an indication of well-being. The greater cost of clothing is most loudly complained of, but at the outside the increase, as compared with England, is not more than 20 per cent., and it is not the fashion in any part of Canada to dress expensively.

In Vancouver, where we stayed the greater part of three days, we had an opportunity of observing the Oriental element in British Columbian life. There are thousands of yellow-skins in Vancouver, which, like Victoria, has its Chinatown, and in many of the smaller villages round about the Chinamen constitute the majority. Chinese cheap labour is, of course, vehemently denounced by the Trade Unions, and no public man dare utter a word in favour of the laborious Celestials. The visitor has great difficulty in forming an opinion upon the merits of the question, but it is pretty evident that until white artisans arrive in much greater numbers than at present, the Colony must depend upon the Orientals for labour in the unskilled trades. At a dinner in Nelson a grave Canadian, a native of

New Brunswick, who is a large employer of labour, whispered in my ear as a secret that could not be proclaimed from the housetops, "The Chinese are hated not for their vices, but for their virtues."

The onus of the Chinaman's offence is that he saves his dollars, and carries them home to China with him. In reply to this, it may be pointed out that if it pays capitalists to employ yellow labour, the Celestials create more wealth and leave it behind them than they carry away. They work at from $1 to $2 a day, and the absence of denunciation for laziness and inefficiency is eloquent tribute to their skill and industry.

The whole white population of British Columbia was shown by the 1901 census to be no more than 178,657, equal to 0·4 to the square mile. The density of population for the whole Dominion is 1·7 to the square mile. In England there are 558 persons to the square mile. No other country except Australia has so small a population compared with area as Canada, but in British Columbia one is not oppressed by the sense of solitude. More than half the population of the Province is clustered along the banks and about the mouth of the Fraser River, and at Vancouver one feels in quite a populous district. We visited New Westminster and other places in the vicinity, and were astonished at the crowds of people in the trains. Everybody seems to be constantly on the move and to have abundance of money and leisure to knock about. Between 1891 and 1901 the population of British Columbia increased by 82 per cent. It will be passing strange if during the present decade the ratio of increase is not enormously increased.

CHAPTER XIX

THE LAKE-LAND OF BRITISH COLUMBIA

ENCHANTED as we had been with Victoria and Vancouver, charmed with their picturesque surroundings, and delighted with the hospitality of their citizens, all confessed to a feeling of pleasure when after six weeks of ever, like the Star of Empire, westward taking our way, we found ourselves in the east-bound express retracing our steps to "England, home, and beauty."

During the week we had spent at the western gates of the Empire a marked change had come over the aspect of the country. Now the far-famed autumn tints of Canada had begun to cast their ruddy glow over every landscape. The maple, the emblem of the land and the people, had donned its carmine attire, and the pendulous birch was draped in gorgeous chrome. Here the autumn tints are of no sickly yellow and russet hue. They are brilliant and glossy, full-blooded crimson and effulgent gold. Not black-spotted and umber-streaked like the autumn leaves of England, but in the long, cloudless Indian summer radiant and healthy, and brilliant as the sunset sky. The sombre plumes of fir and cypress mingle and contrast with the warm foliage of the deciduous trees, but in autumn, at

least, the latter proclaim their precedence in the vegetable realm.

Burrard Inlet, though a deep tidal channel, looks like a lake among lofty mountains far from the sea. At first you pass by numerous saw-mills and lumber and shingle factories, and log-booms towed over the blue waters by tugs or scows. The evidences of industrial life are soon left behind, but before passing under the shadow of the mountains in the Fraser River Cañon we traverse a considerable stretch of fen and alluvial lowland, much of which has been brought to a high state of cultivation. At present it takes from $100 to $160 to reclaim an acre of land in the fertile valleys of British Columbia, and when, after prodigious labour, the land has been put under cultivation, unremitting tillage is required to prevent the bush regaining ascendancy. If land is left in pasture for three or four seasons a dense infantile forest of willow, spruce, and maple proclaims the supremacy of the native flora, the beauty of the climate, and the fertility of the land. British Columbia at present imports a large part of its food supply. The farmers of the Okanagon Valley and the Fraser River Delta cannot cope with the ever-increasing demands of the cities of Victoria and Vancouver, and the mining camps of the Southern districts; and, in addition to these, a large demand for food products has sprung up in Dawson City and the Yukon.

To farm in British Columbia requires capital, but here farming has many attractions superior to those of Manitoba. The winter in the littoral districts is mild and genial. The English farmer who acquires land in British Columbia can have all, and more

HAY-MAKING IN DELTA ISLAND.

than all, that he has in the finest agricultural counties of England. His house is surrounded by orchards, shrubberies, and lawns; he is within easy access of a home market, and everything that he rears is equally remunerative. He obtains splendid prices for all the minor products of his farm—poultry, dairy produce, and fruit, and can never rear

BRITISH COLUMBIAN PASTORAL SCENERY.

sufficient to meet the demand. His only trouble is with the native vegetation, the persistent encroachment of which renders it difficult to farm upon a large scale.

English farmers possessing capital, who are minded to throw up the anxieties of farming in the Old Country and make a bid for fortune in Canada,

ought, before fixing upon a location, to pay a visit to British Columbia, where they would find an equally brilliant prospect of making money with that held out in other parts of the Dominion. It is possible even for those who have little or no capital to make money by farming in the Pacific province, but English farmers are seldom successful in adventures of this description. Along the new lines of railway and the steamboat routes up the lakes you find Swiss and French settlers who burn out an acre or two of timber, start in with a few cows, and by selling cream, milk, and butter push a lucrative trade along the lines of communication. Far in the recesses of the lakes and mountains you often strike these settlers, whose picturesque wooden houses, perched on some romantic promontory, at once bring all the peripatetic photographers into action.

Columbia River and Lake.

We spent the evening in ascending the cañon of the Fraser River, and in the morning reached Revelstoke, 380 miles from Vancouver, where our eastward progress was interrupted. Here we left the Atlantic Express to turn southward at right-angles through the passes that lead into Lardeau and the Slocan, for no man interested in the new era in Canada could omit a trip to the mining camps of Nelson and Rossland. Except the eternal hills, everything here is brand new; ten years ago not a single railway spike had been driven; but, so far as English acquaintance is concerned, the mountains and lakes are as new as the railways. On deviating from the main trans-continental track of

the Canadian Pacific Railway, the route follows the course of the Columbia River. The journey begins amidst lofty mountains, snow-capped and girt with glaciers, whose majesty is insulted by the preposterous names—Begbie, McKenzie, and McPhearson — selected by the Canadian Pacific Railway engineers.

The Gold Range hems in the valley upon the west, and on the east rise the domes and fluted parapets of the Selkirks. Only a mere fraction of the journey is performed by rail. In about a couple of hours after leaving the junction at Revelstoke the train reaches Arrowhead, the landing-stage for the steamers that perform the lake trip, a stretch of one hundred and thirty miles down the Upper and Lower Arrow Lakes to Robson, where their waters are poured into the Lower Columbia River. These lakes, resembling the Scottish lochs upon a grander scale, are really vast glacial troughs in the course of the Columbia River; and in the winding narrows between the upper and lower basins the current is strong and turgid, though less billowy than the rapids of the St. Lawrence.

English tourists are not met every day among the cañons of the Dog Tooth Mountains and the gulches of the thousand creeks that descend to the Columbia and Kootenay Rivers. But if their presence excites the curiosity of the crowd of prospectors, "grub-stakers," miners, and Chinese labourers who form the majority of the passengers on the lake steamers, that curiosity is nothing compared to the wonderment of the visitors themselves. What first excites astonishment is the size and equipment of the boats. But every other sensation is soon lost in

admiration of the scenery which for a whole day enchants the gaze, and is so varied that attention never flags from the head of the Arrow Lake to its *embouchure*.

Arrow Lake was unhappily chosen for the name of a sheet of water which zigzags like the old tea-tray pattern called the "Long Road to Troy." A

ON THE ARROW LAKE.

hundred promontories, fimbriated with a beach of yellow sand or quartz pebbles, cut up the lake like a string of beads—beads of deepest emerald, for the Columbia waters, like all the glacier-fed rivers of Western Canada, have the transparent green tint I have already described. Here mountain torrents spread their flowery deltas half-way across the lake, and there, at an angle of the valley, a huge moraine

hides the mountains from view. Tethered to the white stem of a cotton-tree stands the cayuse of a prospector, while far among the distant hills the smoke of a bush fire gives evidence of his activity. Sometimes on rounding a promontory a magnificent vista is opened up, the hills receding tier upon tier till in the remotest distance their summits melt in the sky. Another turning brings into view a black, dog-toothed, and razor-edged mountain barrier, presenting columnar structure upon a colossal scale. Then the crags close in on both sides, the boat pitches on a tumultuous current, and imagination recalls the scene and the fate of the lover of the Lorelei.

Amid surroundings so entirely novel every episode becomes entertaining, and I grudged a brief siesta in the parlour of the quarter-deck, though after luncheon almost every soul on board had "forty winks" in the heat of the day. Though I preferred to take my station forward, it really made no difference whether one stood at the bows to watch the expanding glories of the lake and mountains or reclined on a lounge chair aft to watch the vista as it closed in behind. I found, however, that the most entertaining company congregated forward. The steamers on the Arrow and Kootenay Lakes have turbine wheels and, being flat-bottomed, are of very shallow draught. At one or two points along the lake shores there are substantially built landing-stages, and at Nakusp and Robson there are slips for transferring freight cars to transport barges. Stoppages were also made at points where no station buildings were to be seen, the boat being simply run gently aground among the silver sand to

land or take on board a passenger. The stranger might marvel whence these passengers came, or whither they were going, as nothing could be seen from deck save the dense thicket of bush along the strand and a seemingly trackless circumvallation of mountains of bare gneiss and diorite. Nor was the wonder lessened when at one or two points we found ladies dressed in light summer finery waiting on the beach to be taken on board. Every one of these stages, however, marked the *embouchure* of a creek which spread a half-moon delta of gem-like pebbles far out into the trough of the lake. These deltas will ere long cut the Arrow and Kootenay Lakes into a score of smaller pools and eventually silt them up altogether. Some of the creeks communicate with fertile valleys at the back of the mountains. At Killarney, where the creek from Fire Valley empties itself, we took on board a gentleman, sun-tanned and weathered with exposure, a prospector who had ridden all day down the creek on the "hurricane deck of a cayuse." When the prospector came on board I was talking to a Mr. Murray, a Commissioner of Forests, whose acquaintance I had made on the trip. In the prospector Mr. Murray recognised an old acquaintance and introduced him forthwith.

Mr. Cole informed me that he had been one of the first "boys" to strike in at Rossland Camp. For two years he had been prospecting in Highland Valley, about twenty miles south-east of Ashcroft on the main line of the C.P.R. Here, he said, there was a great proposition awaiting development. Mr. Cole and others had located several claims upon an outcrop of three parallel lodes containing copper

pyrites, native copper, copper glance, and red cupric oxide. "These are the finest lodes I have seen at all," said Mr. Cole with a sigh, thinking bitterly of the stiff-necked generation which refuses to be charmed by the prospector prospecting never so successfully.

In a land of such neglected riches despondency is the inevitable lot of enthusiasts like Mr. Cole.

A PROSPECTING EXPEDITION.

Still for these exploratory mortals life has its compensations. They are the picture of health and strength, and lead a life of adventure which filled the heart of a touring scribe doomed to return to the galley life of sedentary employment with envy. Mr. Cole was the first prospector whom I had stumbled across, and I was agreeably surprised to find in him a man of gentle mood, pleasant manners, and intelligent conversation.

One gigantic man, who to judge by his battered appearance must have had a terrible conflict with the elements, approached me to inquire if I was one of the "Editors." Upon my admitting the imputation he produced from his breast-pocket a whisky-flask containing a dirty ebon-hued oily liquid. He poured some of the contents upon his palm—a manus like that of an extinct monster—and invited me to smell it. There was no mistaking the strong odour of paraffin. He told me that it was a sample of mineral-oil he had discovered in the district. This amiable, though formidable-looking giant, was also in search of a capitalist, and bemoaned the incredulity and close-fisted caution of the age.

Wealth of the Kootenay.

It will be observed that the magnificence of the scenery was not the only thing to engage attention while sailing down the Arrow Lake. We raved about the scenery wherever we went, but, as we were sometimes reminded, "men cannot live upon scenery." And who even now would have known of the grandeur of the Kootenay had the names of its mines not become gambling counters upon the exchanges of London and New York? Forty years ago none but the trapper had penetrated the recesses of these dewy, misty, snowy mountains; and the metallic lodes, undiscovered twenty years ago, which have brought the railway engineer into the country, outcrop with few exceptions among the snow-slides of the high mountains where howling winter holds sway long after the sun of early summer has warmed into glowing life the green

valleys and lacustrine fairy-lands. And these valleys have been found to be wonderfully fertile. The "Dry Belt" of Washington and Idaho stretches northwards into the southernmost part of British Columbia, the mean annual rainfall is small (from 11 to 19 inches), but every valley has its perennial torrent to irrigate the orchards, and the Okanagon

OKANAGON LAKE.

Valley has become the garden and vineyard of British Columbia. For size and flavour the apples growing here rival those of the Niagara Peninsula. Southern British Columbia has also become famous for pears, nectarines, apricots, and peaches, but the weight of the plum crop excites most astonishment. Every fruit farmer is devoting attention to the

prune harvest, and so prolific are the trees that on a fruit range at Grand Forks, on the Kettle River, I counted on one bough no bigger than my arm eighty drupes, well-developed and luscious fruit.

In the valleys the winter climate varies in the most unaccountable manner. In some the snowfall is slight, though there may be days of extreme cold, as in summer there are days of excessive heat. The saying is that in a winter's journey of ten miles a change from sleigh to waggon, or from waggon to sleigh, is not uncommon. The land is generally sandy loam, but I have seen luxuriant crops growing from white friable sand whose fertility under irrigation might nonplus agricultural chemists.

This, then, is a land of contrasts—long fertile valleys with an almost tropical climate for eight months of the year, separated by snowy sierras, where winter lurks in the lap of May, but where the gold-seeker found the wealth which has opened up the country. Thirty-five years ago gold was washed from the sands of Wild Horse River in East Kootenay. Five thousand gold-hunters gathered together, but when 20,000,000 dollars in gold dust and nuggets had been won the placers "petered out," the diggers were scattered, and "lost was that camp and wasted all its fire." For twenty-five years the miner's pick was unheard and the land remained unexplored till in the summer of 1890 two quartz miners, Joe Morris and Joe Bourgeois, a French Canadian, crossed over from the United States upon a prospecting expedition, and following the Trail Creek Cañon, made the ascent of the Red Mountain on "spec," finding that a forest fire had bared its rugged sides. To

their surprise they found the hill red with "iron capping"—the result of the weathering of pyrites—and every miner knows the meaning of that. They traced the outcrop of numerous veins, and before nightfall Morris had located the Le Roi, the War Eagle, the Centre Star, the Idaho, and the Virginia. Where Morris and Bourgeois lighted their solitary camp fire the stirring city of Rossland now stands.

Four hours' ride in a parlour car now brings the wealthy mine magnate from Rossland to Nelson. It took Morris and Bourgeois a fortnight to tramp the hills, and when they landed there, famished and footsore, and with clothes hanging in fritters, they had not money enough to record their claims. A local store-keeper, named Topping, advanced them twelve dollars, and received in return the Le Roi claim. Eight years afterwards that claim was sold for 3,500,000 dollars.

England has so far derived but little fame or fortune from the exploitation of this section of the Empire; but alien enterprise (at least in the first instance) has in a few years covered a land of lonely mountains, rivers, and forests with busy cities, wonderful railways, extensive metallurgical works, and numerous other products of civilized man's habitation. The mines have yielded the treasure wherewith the transformation has been effected. The amount of hard cash furnished from outside sources expended upon development work has been extremely small; for in most cases where English companies have been formed with large capital the money has not been put into the mines, but has gone into the pockets of astute Americans who bought up the claims for a few greenbacks, and

after doing a little development work, disposed of them at a ransom to English syndicates, converting cents into dollars. In London, British Columbian mines have a bad reputation. Out here you get the other side of the picture; British financiers have a reputation for ineptitude in business; for first neglecting opportunities, then making hard bargains; and lastly, floundering in over-capitalisation. The Canadians complain bitterly of English indifference, but admit the incompetence of many of those who followed in the wake of the American pioneer.

Nothing could be more foreign to my purpose than to boom mining properties. With individual propositions I have no concern; but as mineral wealth constitutes one of the chief natural assets of the Dominion of Canada—an asset of incalculable value lying almost dormant—any inquiry into the resources of the country which left its mines out of account would be ridiculous; and it is sufficient for my purpose to indicate the extent of the mineral wealth which we saw, and to explain the conditions which affect the mining industry as a whole. Any one who has visited British Columbia can understand how disappointment has so often attended the operations of English companies there; but no one who visits the mines can entertain a shadow of doubt as to the wealth awaiting development or the fortunes in store for those who bring prudence and honesty to the assistance of capital investment.

Although up to the end of 1901 British Columbia had produced placer gold to the value of 63,500,000 dollars—and there is no reason to suppose that further alluvial finds do not still await discovery

in the almost unexplored beds of the head waters of some of the northern rivers—it was not until 1893 that the lode mines really began to be productive, the output from this source during the six years immediately prior to that date amounting to no more than an average value of about 60,000 dollars a year, derived from selected rich ores found near the existing lines of transportation. In 1893, however, the value of the production of the lode mines of the province rose to 300,000 dollars, since which time there has been a steady increase, until in 1901 the output from this class of mines attained a value of 13,683,044 dollars.

A total of £3,000,000 sterling, however, does not represent the entire mineral production of the province, which, many may be surprised to learn, was actually greater in the year 1901 than that of the Yukon. The latter was credited with an output of 18,000,000 dollars; while British Columbia produced 20,000,000 dollars. The per capita mineral production of the province was 134 dollars, and the increase for the year was 3,742,029 dollars, or 23 per cent. This is all the more remarkable as, owing to the unfavourable conditions prevailing in the market, some of the lead mines were shut down and production was reduced 25 per cent. Placer gold mining also showed a decrease of 27 per cent., offset by an increase of 26 per cent. in the production of gold from sulphide ores. The great feature of recent mining enterprise has been the opening out of copper mines and the erection of smelters, with the result that in 1901 copper production was increased 175 per cent., and last year the increase was much greater still.

As showing the great importance of its mines to British Columbia, it may be mentioned that (if we except the Yukon Territory, which alone produced gold of the estimated value of $18,000,000) this province in 1901 produced 82 per cent. of the gold, 96 per cent. of the silver, 67 per cent. of the copper, 96 per cent. of the lead, and 30 per cent. of the coal produced in the whole Dominion of Canada. That it is pre-eminently the "Mineral Province of Canada" appears from the appended table of the production for 1901 for the entire Dominion (excluding the Yukon), British Columbia alone, and all the other provinces combined:—

	Dominion.	British Columbia.	Other Provinces.
Gold ...	$6,462,222	$5,318,703	$1,143,519
Silver ...	2,993,668	2,884,745	108,923
Copper...	6,600,104	4,446,963	2,153,141
Lead ...	2,199,784	2,002,733	197,051
Iron ...	762,284	17,238	745,046
Nickel ...	4,594,523	——	4,594,523
Coal ...	14,671,122	4,380,993	10,290,129
Coke ...	1,264,360	635,405	628,955
Total ...	$39,546,067	$19,686,780	$19,861,287

These were the statistics published in 1902. From the "Statistical Year Book for Canada," published in the beginning of July, 1903, it appears that the gold value for the entire Dominion, including the Yukon, for the year 1901, as finally corrected, was $24,128,503. The production of silver, revised and corrected, comes out at $3\frac{1}{4}$ million dollars, and the production of iron has been raised to $1\frac{1}{4}$ million. The corrected figures do not, however, affect the position of British Columbia.

During 1902, corrected statistics for which are

not yet available, mining in most parts of Canada sustained an apparent check in almost all its branches except coal and iron. This set-back, which affected the mining industry of British Columbia in a peculiar degree, was not owing to any failure of the mines themselves, but to the unprecedentedly low market price of copper, silver, and lead. Taking the average values for the whole year of these metals on the New York Metal Exchange we find a decrease in value in copper of 27·3 per cent., in silver of 11·5 per cent., and in lead of 10·4 per cent. The result was a curtailment of production all round, and the drop in the market value thus had a double effect upon the statistics. The operation of these causes brought down the value of the whole metallic production of the province from $19,686,780 in 1901 to $17,036,550 in 1902. The effects were most apparent on the returned values of the silver and copper output, but on the other hand gold, which of course is subject to little or no fluctuation, increased from $5,318,703 in 1901 to $5,961,409 in the following year. The effects of the same causes will be no less noticeable in other provinces. Indeed, notwithstanding the immense increase in the production of iron during 1902, the aggregate value of the mineral production of these provinces increased, according to the estimates, by no more than $325,404. These figures do not take any account of the gold yield of the Yukon, which also underwent a considerable shrinkage in 1902, falling to 14½ million dollars. Gold-mining on the Yukon is passing through a transition stage. Last year was one of great activity in the erection of hydraulic machinery, the advantages of which will be shown in the production for 1903.

CHAPTER XX

ROSSLAND AND THE BOUNDARY

AT its southern extremity the Arrow Lake contracts in breadth and follows a sharp bend towards the east. The transition from lake to river is so gradual that it is impossible to say where the lake ends and the river begins. As our boat entered the narrow ravine in which the long valley terminates, the sky, which had been perfectly serene all day, became clouded over, and night descended with the abruptness characteristic of Alpine glens. We approached Robson, the railway junction for Nelson, Rossland, and Greenwood, in pitchy darkness, the landing-stage being indicated to the captain only by an ingeniously arranged system of electric lights by which he was enabled to swing the boat into her berth with as unerring precision as though it had been broad daylight. While the moorings were being lashed the train from Robson came along the pier within a few yards of the steamer's bulwark.

The railway from Robson to Rossland at first follows the Columbia River for a distance of about twenty miles until Trail is reached, when the road is suddenly diverted at right angles towards the west to make the steep ascent to the gold-reef city.

Rossland, like the eagle, has its eyry among the mountains. It stands at an altitude of many thousand feet above sea-level. The city is only four miles as the crow flies from Trail, but so numerous are the turnings that the metal track is twelve miles long. Wondrous changes have been wrought on the rock-ribbed slopes of Red Mountain since that July day, twelve years ago, when Joe Morris tramped across the lonely cañon and discovered the treasure ledges of Trail Creek. A city of some 9,000 inhabitants, with daily papers, electric lights, waterworks, schools, churches, and theatres, has arisen on the storm-swept mountain wilderness. The people of Rossland entertain no scepticism about the permanence of their mines. In the construction of their streets they have given proof of their faith. These are broad thoroughfares driven in many places through ledges of diorite, and thousands of tons of this hard rock have been blasted away to grade the main avenue of the town.

A bush fire was raging on the Red Mountain slopes on the night of our arrival; but the ruddy flames of the bull pines paled beside the electric illumination of the city. It was 10.30 when we reached the station, where we found the town's band turned out to meet us, and the ladies of the golden city welcomed us from verandahs and open windows along our route as we drove to the Allan Hotel. The Coronation lamps were all ablaze, and the Allan Hotel was crowded with an enthusiastic assemblage of the "nervy boys" who supply the life, the dash, and the energy required to transform a mining camp into a well-ordered, up-to-date town.

The mines never cease working, Sunday and

Saturday, three hundred and sixty-five days, all the year round, working three eight-hour shifts in the twenty-four hours, and the saloons of the city keep open by night as well as by day. I must, however, record it as our unvaried experience that in Vancouver and other "wide-open live cities" where the saloons are thus kept open all night, or nearly all night, we never witnessed any disorder or drunkenness. The "joints," as a matter of fact, though open and lighted up, seemed quite deserted, and we were at a loss to comprehend how it paid the proprietors to pay for bar-attendance, fire, and light during these unremunerative hours.

Towering above Rossland, a little to the west, is a conical hill covered from base to summit with mining plant, the pit-bank works of the Le Roi, the War Eagle, the Centre Star, and other well-known mines. Among American mining camps Rossland is unrivalled for the amount of heavy machinery installed; and as development proceeds more and more costly plant is being erected. Electric power is derived from the Bonnington Falls, on the Kootenay River, thirty-five miles away.

Down a pit shaft there is no distinction betwixt night and day, and our desire to see the subterranean excavations of the famous Le Roi by midnight excited no surprise. Rossland, all ablaze with electric lamps, strung, as it were, at random around the hillsides, was soon left behind; and our "rigs" plunged at breakneck speed into the darkness beyond the city. The contrast between *fin-de-siècle* creations and the rude makeshifts of a country undergoing reclamation is observable in all parts of

Canada, and nowhere more so than among the mining camps.

Outside the limits of the town the trail was more adapted for pack mules than for our barouche; but the post-boy never slackened rein, merely remarking that there was no danger, unless the horses bolted over a precipice. Trusting to the sagacious quad-

BONNINGTON FALLS, KOOTENAY RIVER.

rupeds, we jolted over boulders and plunged among sand-hollows, till we reached a firmer road-bed in the vicinity of the mines, and got out at the 300 feet level of the Le Roi. Now we could look back upon Rossland, a glittering little island in a boundless solitude of mountain darkness.

We were now treading on slippery ground, and as I make no pretentions to being a mining expert,

I must content myself with recording the admiration, mingled with astonishment, all expressed at the magnitude and superb character of the plant at all the mines. The principle has evidently been to erect big works for big mines. The steel hoists are of immense size and elaborate design, and at various mines electric motors of 400 nominal horse-power have been installed, capable of driving 40-drill air-compressors. Most of the ponderous machinery was running—smoothly, noiselessly, incessantly. Whatever the fortunes of the game in London, and however the gamesters may bless or ban the Le Roi, the spirit shown here is unmistakable. "Drill, ye tarriers, drill," is the motto at the mines. The massive head-gear, crushing machinery, and compressor plant of the Le Roi quite eclipsed anything we had previously seen in Canada.

In every mining province of Canada I heard the criticism constantly repeated that one reason why many English concerns do not prosper, while adjoining properties owned by American companies yield regular and big dividends, is that the American never spends a cent on superfluous equipment; whereas the moment an English syndicate acquires a property a policy of magnificent equipment—from ore bins to miners' lodges and officials' residences—is inaugurated; and the expenditure on plant is always in advance of the outturn from the mines. This criticism may have some justification, but there is another side to the question. For one thing, English companies confer more lasting and substantial benefit upon the districts in which their properties are situated, by spending more money upon buildings and in wages,

and in the case of the Le Roi the policy of first-class equipment seems to have been justified by the fact that ores can now be profitably treated of a grade which, with inferior appliances, would only have been flung upon the waste heaps. Grandiose as their conceptions generally are, the Canadians have been slow to imbibe ideas of magnificent enterprise in the opening up of their mines.

A New Copper-Field.

At an early hour on the following morning I took train for the Boundary. A September morning in British Columbia is like a September morning in the Scottish Highlands. Our route as far as Robson took us over the metals which we had traversed on the preceding night, but in the darkness we had missed the scenery. Here the Columbia River is a strong-running torrent of immense volume. Rushing down its pearly bed of quartz and diorite boulders, its waters seemed of a yet more intense shade of translucent green than any we had yet seen—as brilliant, I thought, as a solution of nickel or bluestone. But the interest of this part of the journey was tame compared to that awaiting us after changing carriages at Robson and getting upon the Columbia and Western Railway, the branch of the Canadian Pacific Railway which is carried right over the hills from the Columbia River Valley to that of the Kettle River and Christina Lake. For the first few miles the railway skirts the eastward extension of the Arrow Lake, rising higher and higher above the basin till its waters

become like a string of silver mirrors far beneath framed in the green of the forest, and the whitish grey of gneiss, quartzite, and diorite mountains. Here and there a bead of ochreous sand defines the lake margin, and we were fortunate in having a calm morning when every feature of the landscape was mirrored in the water. Hills, trees, and clouds were double—cloudland and shadow, snowy peaks above and reflection beneath. The Columbia and Western was one of the boldest pieces of railway engineering undertaken by the Canadian Pacific Railway in British Columbia. The difficulties of construction were enormous, and the cost over a distance of 99 miles was over $40,000 a mile. It was necessary to drive no fewer than seven tunnels, one of which is 3,000 feet long, 16 feet wide, and 23 feet high. These tunnels were all excavated from hard crystalline rock, mostly closely-grained diorite. It is not usual in building railways in Canada to do much tunnelling, and the tunnels in this railway are accordingly looked upon as marvellous feats. The most astonishing thing is that a railway should be there at all. Four years ago, when construction was commenced, the district was a mountain wilderness with only a few scattered mining camps, and a population barely aggregating two thousand persons. Its mineral wealth was very imperfectly understood, and the land under cultivation was confined to a few patches upon the forks of the Kettle River.

Now no mining camps in the Dominion are attracting more attention than those of the Boundary. This district, as its name implies, is contiguous to the United States frontier. Like many

another mineralised region of British Columbia, Boundary Creek owed its beginnings to placer mines. As far back as thirty years ago $50,000 of gold dust and nuggets was taken from the creek; but the placers did not prove lasting, and the district was deserted without any one giving attention to its giant leads of copper, quartz, and iron. Since the opening of the railway the "Boundless Boundary," to use the epithet which its enormous ore bodies have won for it, has come to be regarded as the most important copper-producing area in British Columbia.

After leaving the Arrow Lake with its scenic grandeur rivalling the Tyrol, the Columbia and Western Railway, having scaled an incline 18 miles long to an altitude of 2,000 feet above the lake level, turns southward to surmount (or rather penetrate) the water-parting by means of a tunnel 2,575 feet above the Columbia River, and rather more than 4,000 feet above the sea. The route then begins to dip towards the tranquil waters of Christina Lake, the whole descent 24 miles long being accomplished amid scenes of surpassing interest. A little distance from the summit the railway is carried across Porcupine Creek by a trestle bridge 190 feet high, the giddiest structure of the kind we had crossed in Canada. As Cascade City is approached another trestle bridge takes the track across the Kettle River, and although this structure is only 90 feet high, it inspires more lively tremors in the breasts of unaccustomed passengers owing to its immense length (1,500 feet long) and the sharp curve which the bridge describes. At Cascade City the Kettle River rushes through a narrow rocky

cañon in a series of cascades making a descent of 125 feet, thus creating a stupendous power estimated at 20,000 horse-power, though such a power would not be available during the dry months at the close of summer. The "townsite," owing to the harnessing of the falls, is a place with a future, and hopes to rival the industrial importance of Spokane. We made no halt at Cascade City, the first stoppage in our programme being at Grand Forks. In the Kettle River Valley the scenery was quite different to anything we had hitherto seen. We had now entered upon the "Grand Prairie," as the fertile fruit-bearing lands on the banks of that river are called.

Ore-Smelting Industry.

Grand Forks takes its descriptive appellation from the confluence of two arms or "forks" of the Kettle River. The principal object of our stay here was to visit the Granby Smelter, reputedly one of the most perfectly equipped in Canada, but we also had an opportunity of learning something about fruit culture in the "Dry Belt" of Washington which here passes northwards across the international boundary. On the south bank of the Kettle River we beheld the bush fires raging among the lofty tamaracks and bull-pines on the hills within United States territory. The whole country had a parched appearance. The vegetation was russet and yellow, and the ground white and thirsty, buried over great stretches with deep blown-sand. The crops had already been gathered from the irrigated fields, and the farmers were busily securing their prune and apple harvest.

The trees, bending under their load of fruits of every hue, golden and ruddy, and puce, seemed to be planted in loose sand, the fertility of which under irrigation I was at a loss to comprehend. One fruit farmer presented us with a present of apples and plums which kept our party replenished all the way back to Winnipeg. We of course saw Grand Forks in the dry season, when the exuberance of its sub-tropical summer was over.

Our chief object in visiting Grand Forks was to see the smelter of the Granby Consolidated Company. The demonstration at the smelter was recompense abundant after our drive through the hot air and over the sandy trails. We had seen several smelters before, but none so large as this, probably none so perfectly equipped, and none having a converter for transforming the matte into blister or comparatively pure metallic copper. The usual practice in British Columbia till the beginning of last year was to smelt the ores into a matte containing from 40 to 50 per cent. copper, and to ship the product in this crude state to the metallurgical works in the United States. By converting matte into ingots averaging 98½ per cent. pure metal, a saving of 50 per cent. in freights is effected, and the Granby Company is now treating matte from many of the smelters in the surrounding district. The converter capacity is from 36 to 40 million pounds per annum, or about 1,500 tons monthly. Owing to scarcity of coke consequent upon a protracted strike at the collieries in the Crow's Nest Pass, the furnaces and the converter were only running at less than half their maximum capacity at the time of our visit.

We were received at the smelter, which is built upon the rugged banks of the North Fork of the Kettle River, by Mr. A. B. W. Hodges, the Superintendent, a comparatively young man, who had designed and constructed the works. We found that nearly all the mining men here are Americans. Mr. Hodges had learned the art and science of the metallurgical mystery at Philadelphia, Pueblo in Colerado, San Luis Potosi in Mexico, and elsewhere along the silver-lead-copper belt. All the mining and smelting machinery in British Columbia is of United States manufacture, and that it should be so is only natural seeing that the great majority of the officials, being either Americans, or having learned their profession in America, draw out their specifications in such a way as to give the preference to the United States makers of mining machinery.

To a man who has never seen a smelter before the drawing of the white-hot molten metal from the settlers is a thrilling sight, but I question if any useful purpose would be served, or any entertainment be afforded to my readers, by a laboured account of the process here. The practice of to-day may also be out of date to-morrow. This is particularly true of the Boundary where, owing to the low grade of the ores, rigorous economy must be studied and innovations are being constantly introduced. For the benefit of the general reader, or the investor in mining shares, I may indicate briefly the principal operations into the principles and practice of which we were carefully—and I may say luminously—initiated. The ore cars from the mines are run over a trestle into a series of receiving bins, and thence conveyed to two gyratory crushers

having together a capacity of 2,000 tons daily. With never-ceasing deafening roar this ponderous machine crushes in its steel maw huge chunks of flinty rock as though they were hazel nuts. On emerging from the crusher the ore, reduced to the diameter of a 4-inch ring, is raised by a continuous steel bucket elevator to an automatic sampler. After the sampling process the ore is conveyed to the smelting furnaces, which in general appearance do not differ much from the ordinary blast furnaces in our iron works. The gases pass off from the top, and the furnaces are charged with ore, fluxing materials, and coke, the nature and quantity of the flux varying with the mineral composition of the ore of every mine. Most of the Boundary ores are practically self-fluxing, and each of the four furnaces at the Granby Smelter has a capacity of 380 tons daily. The blazes at the furnace head have the livid blue of sulphur and carbon monoxide, and elaborate flues are required to carry off the fumes.

From the blast furnace the smelted ore flows into capacious crucibles called "settlers," in which, owing to its greater gravity, the metal collects at the bottom, while the red-hot slag incessantly overflows at the top through spouts which issue into gushing water by which it is granulated and carried off to the slag heaps. The crucibles containing the metallic portion are drawn once in two or three hours. When the plug is drawn the liquid copper, blinding white and radiating scorching heat, leaps forth in a dazzling jet into receivers mounted upon wheels (known as matte-ladles), in which it is transported to the moulds to

cool and solidify into matte. The latter substance, when quite cold, has rather a slaggy or tufaceous appearance. It is puce-coloured or blackish brown, but blister copper has a bright metallic sheen, though vesicular and granular owing to escaping bubbles of gas. The workmen who draw the settlers wear enormous gloves made (if I recollect rightly) of Cariboo skin. The pyrotechnic displays in the spacious furnace-room were a grand sight for the touring scribes. The converter is essentially a reverberatory tilting furnace, having a daily capacity of 25 tons. The whole process of charging, applying the blast, and discharging the metallic copper is done automatically. The copper, retaining all the gold and silver values, which run from about 7 to 17 per cent, is moulded into ingots weighing about 300 lbs. each. These are shipped to the refineries to have the gold extracted.

Although owing to its novelty everything about the smelter was of interest to us, that which Mr. Hodges and the other officials laboured most earnestly to impress upon our minds was that the whole works are operated by electricity generated by water power from a head of 45 feet in the North Fork of the Kettle River at a little distance above the works. The power station, situated on the river bank 100 feet below the level of the furnaces, is only 1,000 feet from the smelter. The power by which the blowers, sampling machinery, crushers, converter, and other apparatus are driven is created by three double-turbine water wheels, and all the machinery is run by Westinghouse induction motors. At extreme low water the power developed is never less than 1,200 h.p. This is a matter in

connection with British Columbian mining the importance of which it would be difficult to overestimate. In many richly mineralised countries the cost of power and the scarcity of water are the greatest obstacles to development. In these respects the mines of British Columbia, handicapped by difficulties of transportation, are fortunately well off, for the country abounds in water power which will soon be available in every mining camp in the Province.

Our inspection of the great smelter—famous all over Canada—at an end, we were driven round some of the fruit farms, and then returned to the station to entrain for Greenwood. A special train came along for us, bringing with it Mr. Duncan Ross, the Acting Mayor of Greenwood, who was to be our guide, philosopher, and friend during our stay in the latter city.

Greenwood and Phœnix Camps.

Mining camps may be, and often are, fine towns, and in this category must be placed Grand Forks and Greenwood. The latter is in every respect the rival of the former; each has a formidable array of budding industries, but, as at Grand Forks so at Greenwood, all other enterprises yield in importance to the local smelter. The Greenwood Smelter is directed by Mr. Paul Johnson, one of the many Swedes to be met in Canada and the United States raised by industry and superior scientific training to positions of trust and influence. At Greenwood Mr. Johnson has brought the system of smelting low-grade copper ores to a pitch of unrivalled

efficiency and cheapness. On the Thursday morning (September 11th) we were shown over the smelting establishment by Mr. Johnson, who (as his friend, Mr. Duncan Ross, recorded) fully explained to us "how ore could be treated here more cheaply than in any other place in the world, and how here likewise a furnace could treat more ore than anywhere else in the universe." The cost, we learned, had been brought down to little over $2 per

GREENWOOD SMELTER.

ton, the time to one hour from ore to matte, and the record of efficiency stood at 460 tons of ore per furnace in the twenty-four hours. The rock-crusher, it might be added, can grind a ton in three-quarters of a minute, a wonderful performance considering the adamantine hardness of the ore. Mr. Johnson, I believe, has a great reputation for so blending his ores according to their chemical composition so as to make them all self-

fluxing, and the furnaces are charged with no more than 12 per cent. of coke. By the attainment of such exceedingly low costs in smelting and in winning the ore the giant lodes of low-grade copper in British Columbia give promise of rivalling the higher grade deposits of Montana.

On the morning following our arrival at Greenwood we visited the smelter and then started off in a four-horse stage up the steep mountain road to Phœnix. Greenwood was soon left far beneath, a cluster of picturesque white houses framed in a straggling forest of bull-pines and tall larches, a mere speck in the trough between the mountains. Our stage mounted higher and higher, and the spirits of the party became more buoyant as we soared aloft. With his voice and his long whip the driver kept up a ceaseless commotion, but his sturdy cattle knew their business and took their own time. Until about four years ago these stage-waggons were the only means of locomotion in the Boundary. The mountains in this district are remarkable neither for great height nor for impressive outline. Severe glaciation has given to them that rounded contour which we associate with the Grampians and the mountains of Wales, and the burning out of the forest has in many places produced an aspect of desolation. By the side of the trail we sometimes saw holes dug out of the mountain side, excavations like wild beast lairs that marked spots where pockets of copper ore had been worked out by the miner's pick. Some of these diminutive workings had been of extraordinary richness, yielding as much as $150 per ton, and although the vein might only yield about

twenty tons, still this would mean $3,000 or $4,000 to a miner for a month's work."*

About noon our stage-waggon drew up opposite the Dominion House, as the chief hotel of Phœnix is called. We were now at an elevation of 4,600 feet above sea-level, and the copper mountains rose round about us on every side, attaining probably an altitude of another thousand feet or more. The Granby Company quarries its ore from vast excavations, resembling craters, on the mountain side. The miners call these yawning calderas the "Glory Holes." The ore bodies have actually been exposed along a length of 2,000 feet, cross-cuts have been driven proving a width of 400 feet without reaching the facies of contact with the country rock, and the diamond drill has proved the existence of the ore at 1,700 feet in depth.

It is no exaggeration to say that acres of calcopyrites have been "blocked out." We rambled for about an hour through the stopes, actually performing the circuit of these gigantic "pillar and stall" blockings. The system of mining is simplicity itself. An inclined adit is driven into the hill; then a "raise" is cut upward to an open surface quarry, where the ore is blasted and hurled down the "raise" by its own weight, to be dumped into tramcars at the adit-level. Costly winding machinery is thus entirely dispensed with, gravitation performing the whole work of bringing the ore to the bins for shipment to the smelter.

* Since the date of our visit systematic development has proved some exceedingly rich veins of copper-oxide on sites where these rude excavations had been made. The lodes are of true fissure formation, high-grade, and quite distinct in structure from the low-grade ore bodies described in this chapter.

The ore mountain at Phœnix is a geological curiosity. The first tunnel was opened on the 22nd of May, 1898, the first tram-load of ore left the camp on the 11th of July, 1900, and up to the date of our visit the Knob Hill and Old Ironsides Mines had sent half a million tons to the company's smelter at Grand Forks. As development has proceeded the real nature of the deposit has been slowly revealed. A rational estimate after the first year's development work placed the ore in sight at 54,000,000 tons; but stupendous as this total is, Mr. Williams, the manager, told us that last summer's excavations and surface-stripping work, coupled with the fact that the ore had been proved with the diamond drill to a depth of 1,700 feet, warranted him in raising the estimate to the almost incredible figure of 70,000,000 tons! Needless to say, the ore is extremely low grade, but it is practically self-fluxing, and what with the cheap method of quarrying and the fluxible nature of the ore, the whole cost of treatment from crude vein-stuff to matte has been brought down to $2.50 per ton, or even lower—the lowest hitherto attained on the American Continent.

Geological Characteristics.

The geological structure of the Boundary mountains is highly complex. The eastern bulwark of the Rocky Mountains consists for the most part of stupendous masses of tilted sedimentary strata, (exhibiting as a general rule little lithological alteration) of Palæozoic age, but in this central region there are monuments of sedimentary de-

posits of every geological period, from the highest antiquity to Tertiary age, greatly altered and commingled with eruptive rocks of different ages and mineralogical composition. In a general way the miners speak of all the country-rock as "diorite," but the rock of most common occurrence would seem to be dolerite, or greenstone, which is often broken up by bosses of syenite, granite, and porphyry, and dykes of various volcanic minerals. Some of these have been assigned by the members of the Dominion Geological Survey to the Jurassic period, but in islands scattered all over the district the ancient metamorphised sedimentaries and the Mesozoic eruptives are overlaid by sheets of volcanic rock, the remnants of Tertiary volcanism, for it would seem that in Miocene times the whole country was again overspread by a pile of volcanic products in which andesite and basalt predominate. In a general sense the geological features of the Boundary District do not differ from those of the entire mineralised region of Southern British Columbia, but there is something individual in the enormous size of the low-grade, copper-bearing sulphide deposits. The latter invariably occur amidst the monuments of the most recent volcanic activity, but ores have been found (where alteration-products abound) in rocks of any age, and in addition to the monster sulphide formations there are smaller but rich veins of oxidised copper ore, and small gold and silver-bearing quartz veins. The sulphide deposits have undoubtedly been formed by mineralising solutions traversing the country rock along zones from which they have replaced with their metallic compounds, molecule by molecule, par-

tially or completely, the original constituents of the non-mineralised rock. The ores in these substitution-products are pyritic, and chalcopyrite and pyrrhotite are the leading minerals. Pyrrhotite is occasionally replaced by magnetite, and the matrix is a highly complicated and extremely-basic silicate of dark purple colour. The ore might in a loose chemical phraseology be described as a mixture of calcium-magnesium-iron-copper silicate, and copper-iron sulphide. Sometimes the process of substitution has proceeded so evenly that the ore has taken on a beautifully banded appearance. In the pyrites the copper is replaced by a variable proportion of gold, silver, and other metals, a feature so invariable that every ore contains a characteristic gold value.

So far no ores have been found in the most recent volcanic products, but the evidence is pretty conclusive that it is to the volcanism of the Tertiary age that the mineralisation of the older crystalline rocks is due. In all likelihood the metallic contents were precipitated from solutions derived from the magma of the late eruptives, but though hydrothermal in origin, no loss of values in depth has hitherto been proved. In the case of the low-grade ore bodies there is not even the suspicion of "secondary enrichment," nor any presumption of deterioration beyond a shallow zone of alteration. So uniform is the composition of the ore that the presumption is almost irresistible that the magmatic secretion has been derived from profound depths, so that there would be no reason to expect a change in mineral composition until an entirely new geological horizon is reached.

The Mining Fraternity.

Having finished our exploration of the Knob Hill Mine, we again mounted the stage waggon, and drove round the brow of the hill to the Snowshoe Mine, a similar but more recently opened-up property on the same dioritic protrusion. The Knob Hill looks towards the south, while the Snowshoe is upon the north-westerly aspect of the hill. Upon both properties the system of mining is identical. It would indeed be more correct to say that upon both properties the ore is quarried, not mined, and upon either side of the hill the ore bodies are exposed over an area yet to be defined, there being no clearly-traceable facies of contact as the chalcopyrite passes by almost imperceptible transition into the country-rock.

At the Snowshoe we were received by Mr. George S. Waterlow, the Deputy-Chairman of the Company. The Granby Company which owns the Knob Hill and Old Ironsides Mines is a Canadian Company having its head office in Montreal, but the Snowshoe is in English hands and the head office is in London. The company known as the Snowshoe Gold and Copper Mines was formed in the summer of 1901 with a capital of a quarter of a million pounds. Work on the Snowshoe was commenced in 1900, with an output of 297 tons of ore, and such is the energy with which the British Company has gone to work that the shipments for 1902 were brought up to 20,800 tons—a small figure compared with the total of 310,601 tons for the Granby Mines, but an earnest of what may be expected from the property as development proceeds. As illustrating the pro-

gress of the district it may be mentioned that while in 1900 the ore shipments of the Boundary amounted to rather less than 100,000 tons, last year's production was upwards of 500,000 tons—a higher aggregate than that for the mines of the Rossland District.

One of the charms of the Snowshoe is its romantic site. A handsome lodge adjoins the mine, and here an elegant luncheon, at which everything in season awaited us, had been prepared by Mr. Waterlow. Our host is one of the best-known and most popular men in British Columbia, and upon the present occasion, besides mine managers and managing directors, we had the company of mayors, doctors, clergymen (sky-pilots), newspaper editors, and judges—the gathering representing all the enterprise and culture of the Boundary. There is no place in the world for good-fellowship like a mining camp, and everybody you meet seems to be distinguished for pre-eminence of some sort. A more enthusiastic party never sat down—enthusiastic about everything—the mountain scenery, the "Glory Holes," the men and the manners of the country, everything that the Boundary contained. Where all are bursting with optimism, its influence is irresistible, but the optimism of the Boundary is no unsubstantial dream. Where men literally tread on mountains of ore there is a solid foundation for optimism.

"Tired, hungry, but enthusiastic," as a local paper truthfully declared, we arrived in the evening of that memorable day at Nelson, the metropolitan city of the Kootenay District. At the Hume Hotel we met a crowd of Senators, M.P.'s, and Provincial M.P.'s, for in Canada there are not only M.P.'s,

but M.P.P.'s. The politicians themselves were inconspicuous, for Nelson was filled with the Members of the Canadian Mining Institute, and a banquet had been arranged for that evening by the citizens of Nelson to the members of that institute and to the visiting British journalists. It had originally been intended that the banquet should commence at eight o'clock, but as some of the leading mining men who had been visiting mines in the Slocan had not arrived, it was close upon eleven o'clock before all sat down in the large dining-room of the Hume Hotel. The citizens' banquet at Nelson was the most formidable function we had yet attended. The toast list contained the names of no fewer than thirty-three speakers. The Canadian custom with regard to toast lists differs from ours. Each toast is proclaimed from the chair, and there may be two, or half a dozen, or more speakers, who do not, as with us, alternately propose the toast and respond thereto, but rather chose the subject named as the theme for a discursive address. How wide the scope is may be judged from toasts like the following:—"Our mining interests," "our commercial interests," "our railway interests," "our legal and banking interests"—a few of the many interests which found a place in that memorable list at Nelson. The oratory was in full flow, and the morning light was contending with the pink illumination of the electric lamps when we had to tear ourselves from the banqueting hall to catch the Kootenay Lake steamer at 7 a.m. to make the connection with the east-bound mail through the Crow's Nest Pass *en route* for Winnipeg.

NELSON CITY, WITH MINING PLANT.

CHAPTER XXI

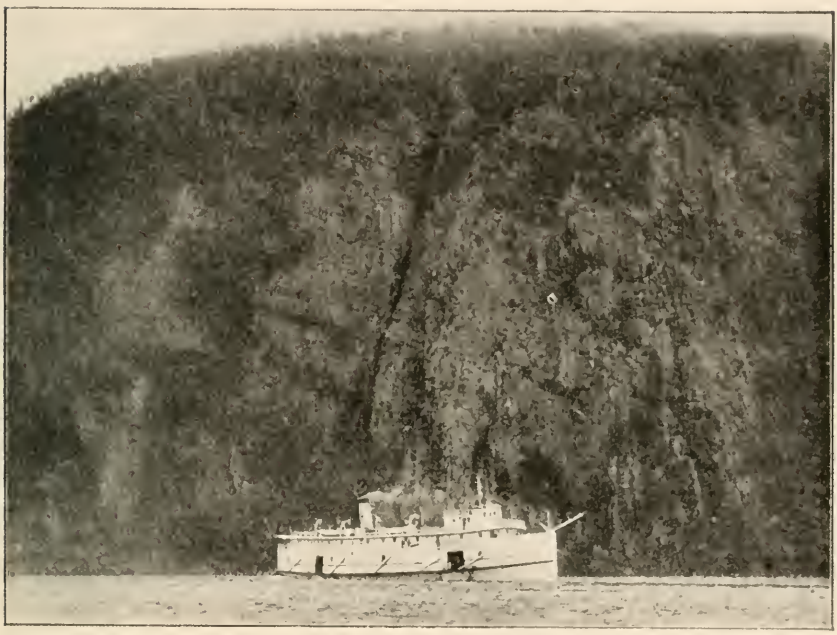
THE NICKEL MINES OF ONTARIO

THE scenery along the Crow's Nest Pass, though by no means destitute of beauty, has not the grandeur of the mountains which confine the track of the main line of the Canadian Pacific Railway by way of Rogers Pass and the Fraser River Cañon. At its western extremity the Crow's Nest Pass Railway traverses a lake-land of softer features than the mountain-framed lochs in the course of the Columbia River. There are level plains of considerable extent which have the appearance of dried-up lake-bottoms, and upon those lakes which still remain the land seems to be encroaching fast. In this region, the "right-hand bottom corner of British Columbia," one looks in vain for peaks like Sir Donald and Mount Baker, rising above the clouds with a spotless coronet of snow; the hills are less lofty and severe glaciation has robbed them of the savage boldness of outline characteristic of the giants of the Selkirks. It was night ere we reached Fernie, the centre of the new coalfield, but all day long we had been entertained at the countless stopping-places by seeing the genesis of new towns in every stage from the clearing in the forest to the laying out of broad avenues in the "townsite" period of development.

At Fernie a long vista of lights and interminable rows of large white tenements indicated the existence of quite a big town to the north of the railway track, while upon the south rows of coke ovens stretching along a great distance gave evidence of the bustling enterprise which has invaded this lately explored corner of the Empire.

Save a prairie fire, no incident worthy of mention occurred in our return journey through Alberta, Assiniboia, and Manitoba. In the interval a striking change had come over the landscape. In our westward progress we sailed through seas of standing corn variegated at intervals by fields of wheat in the shock. Already the loading was almost over, and the country far and wide was in stubble. After a day's stay at Winnipeg, which we found more crowded than upon the occasion of our west-bound passage, we resumed our journey, following the all-rail route by the northern shore of Lake Superior. From Port Arthur to Heron Bay the Canadian Pacific Railway hugs the lake, and the scenery is frequently of the most impressive description. The shore is lofty and rock-bound, diversified by stormy capes and romantic bays. A strong wind from the east threw up waves which broke upon the beach with a roar like the breakers of the German Ocean. The northern girdle of the lake is a mountain chain which descends to the water in rugged outliers of pink syenite, red granite, and masses of coarsely-crystalline gabbro. Such is the scenery along the greater part of the coastline of the district of Ontario known as Thunder Bay. Forests of Jack Pine and Spruce, hitherto little trodden except by fur traders and *coureurs de bois*

cover the hinterland and extend to the shores of James Bay and the Barren Lands of Keewatin. Leaving the shores of Lake Superior at the mouth of the Pie River in Heron Bay, the railway strikes through the district of Algoma in a south-easterly direction until at Sudbury, in Nipissing (the most easterly district of New Ontario), it follows an



NORTH SHORE, LAKE SUPERIOR.

almost due-easterly course to the banks of the Ottawa River.

Few English tourists break their journey at Sudbury where the Minneapolis, St. Paul, and Sault Ste. Marie Railway turns south from the main line of the Canadian Pacific Railway. On the morning of September 17th (five days after leaving Nelson),

the "British Editors" enjoyed the hospitality of the mayor and citizens of Sudbury, and devoted the greater part of the day to a visit to Copper Cliff, the chief seat of the nickel-mining industry. No greater contrast could be conceived than that between the mining region of British Columbia and this part of Ontario. The landscape is sterile and uninteresting and it is quite exceptional to come upon a Canadian town with so depressing an aspect as Sudbury. The town, or village, wears a look of arrested development. Unlike Rossland and Nelson, Sudbury is dejected and "old in the face." But the traveller who halts at Sudbury may inspect one of the most noteworthy regions on the face of this planet, the nickel tract of Algoma, which now yields the greater part of the world's supply of that metal. An hour's drive from Sudbury brought us to Copper Cliff, where the mines of the Canadian Copper Company are situated. During September and October, in Ontario, as elsewhere in Canada, travelling is invariably delightful beyond description. Through Algoma we had beheld a landscape diversified with lakes and wooded uplands, and now the hardwoods were arrayed in that gorgeous autumn livery for which Canada is famous. Every day the maple leaf seemed to be dyed a deeper crimson and the birch leaf to turn a richer yellow. Ontario abounds in that type of scenery which the poets of the New World have rendered familiar to English readers, and in its ruddy autumnal garb that scenery can be enjoyed in one of its most charming moods. To scenes like these, hushed woodlands and sleeping lakes, the vicinity of Copper Cliff presented a depressing contrast. Since skirting the barren

shores of Labrador we had seen nothing so desolate in the whole of Canada.

Around Copper Cliff the country has been entirely denuded of vegetation. Over a wide radius around the mines a waste of sand and naked rock has been dyed a hue of greenish-ochre by the fumes from the long rows of roast heaps, and the houses of the miners are scattered about with little pretence to arrangement in streets upon the calcined ledges of diorite and greenstone that form the country rock. Canadian villages are as a rule pretentious, and the houses of workmen, frequently surrounded by gardens, are elegant and attractive. At Copper Cliff the houses had a blasted appearance, and even the residences of the officials made a poor architectural display. Most of the workmen at Copper Cliff are foreigners. Many are Finns, and the blonde faces and flaxen hair of the women and children about the doors showed how largely the Norse element predominated. The miners receive good wages, the average of $2 to $3 per day comparing favourably with the customary standards of remuneration paid for labour in Ontario. Mr. Turner, the manager of the mines, told us that the company had endeavoured to induce the employés to live in houses beyond the fumes from the roast yards, but these efforts had been unavailing, the men preferring to have their dwellings close to the pits.

When the copper-nickel deposits of Ontario were discovered, efforts were put forth by Canadians to interest British capitalists in the discovery. These overtures proved unavailing, and Americans stepped in to exploit the mines. For their superior wisdom

and enterprise the Americans have been amply recompensed. The nickel mines of the Canadian Copper Company are among the richest in the world, and are the most productive in Canada. The success of this company has at length attracted imitators and competitors, but it remains to be seen whether any of the mines more recently opened will prove as rich and remunerative. According to the officers of the Dominion Geological Survey no more than one-quarter of the nickeliferous area has yet been taken up, and there may be extensive nickel deposits which still await discovery. The nickel mines of Ontario illustrate the oft-repeated history of mining enterprise in Canada. Americans have acquired the pick of the propositions at prospect value, while British companies too often purchase partially developed mines at a high valuation. The original investment in cold cash of the Canadian Copper Company fifteen years ago amounted to the paltry sum of $175,000. When the International Nickel Company was incorporated in the summer of 1902, the properties taken over from the Canadian Copper Company, including their reduction works at New York and nickel-steel plant at Pittsburg, are said to have been capitalised at $9,000,000, and dividends of 12 per cent. upon the basis of that valuation are alleged to have been regularly paid.

The concessions of the Canadian Copper Company embrace 6,000 acres of mining lands at Copper Cliff, in the vicinity of which six mines have been opened out. The company likewise owns other estates in the district and an immense augmentation of production has recently been brought about by the opening of a mine at Creighton on the Mani-

toulin and North Shore Railway, twelve miles from Sudbury. At the time of our visit the output of the Copper Cliff mines was about 500 tons of ore per day, and shipments upon a similar scale had been sent throughout the summer months from Creighton. Work in all departments had been curtailed pending the consummation of the Nickel Trust, but on the completion of the deal, operations were resumed with redoubled energy, and the manager, Mr. A. P. Turner, informed me that six months hence production would be more than doubled. This would mean that the company would now be sending to the refineries 150 tons of matte per day.

Peculiarities of Formation.

The nickel pits at Copper Cliff had no resemblance to any other mines we had seen. A man who has looked over the brink of a crater may picture to himself their yawning orifice and forbidding aspect. Only a man with a steady nerve is able to stand on the rim of the open cast and peer down some twelve hundred feet to the gloomy floor where the tarriers working the drills can be faintly descried. The ore is conveyed from the pits by gravitation along adits driven at successive levels from the face of the hill.

Almost without exception the ore bodies occur as lenticular masses, filling great pipes or chimneys in the mineralised belt. These pipes are frequently connected by stringers or radiating fissures running far into the diorite or dolerite which constitute the predominant rocks of the district. The pipes of pyrrhotite with chalcopyrite may have a diameter of 150 to 200 feet, the floor and vertical sides in-

variably present nothing but clean glancing ore, and not infrequently it is found that as the pipe is quarried out the circumference increases with depth. The ore bodies are continuous in value with depth, and so far as I could gather not one of the pyrrhotite pipes has yet been found to "peter out." The mineralogists of the Dominion Geological Survey therefore entertain no doubt that great permanency will mark the nickeliferous deposits. From what I have heard of the diamondiferous pipes of "bluestone" in South Africa, I should think that they have a somewhat similar geological structure; or I might compare the nickel pipes with the truncated plugs of basalt and dolerite in the volcanic monuments of central Scotland. The Sudbury nickel deposits occur in the metamorphic rocks of the Huronian Series, in an area greatly disturbed by volcanism. Eruptive granites, gabbros, and trap dykes, have deranged the original stratification, but as the pipes of nickeliferous pyrrhotite seem to have been formed at profound depths in the earth's crust, it might be wrong to conclude that they are alteration products. Geologists are therefore warranted in believing that the Ontario nickel mines are veritably inexhaustible.

The old mines of the Canadian Copper Company do not on the average contain ore yielding more than $2\frac{1}{2}$ per cent. copper and $3\frac{1}{2}$ per cent. nickel, but the nickel content in some of the more recently opened mines of this and other companies runs as high as 8 per cent. The iron content is about 30 per cent., and some of the ores yield sulphides—in rarer cases tellurides—of gold, silver, platinum, and palladium. I was much surprised to learn from Mr.

James McArthur, the works manager, that no cobalt is associated with the nickel. These two metals have so many physical and chemical properties in common that one would expect their ores to be found associated, as indeed they invariably are in meteorites. I inquired if cobalt occurred in any of the other mines of the district, but though these yield an extraordinary variety of minerals, no one seemed to have heard of cobalt being found anywhere. The precious metals are recovered at the refining works at Camden, New Jersey, now merged in the Trust. What the real value of the nickel mines has been to the Canadian Copper Company it is impossible to ascertain in Canada, as hitherto it has been the custom to smelt a 35 per cent. to 40 per cent. nickel-copper matte for shipment to the company's reduction works at New York. The company also owns plant at Pittsburg for the manufacture of nickel-steel, which has been used in making armour and boiler plates for the United States Navy and bayonets for the United States Army. They have a special factory for the manufacture of nickel tyres, and have recently gone in for the production of nickel-steel rails which have been laid upon a thousand miles of track in the vicinity of Pittsburg.

Benefits of Mining Exploitation.

At Copper Cliff we had a forcible illustration of the truth of a concept we had begun to entertain in the other mining districts which we had visited in Canada—that its mines have not benefited that country to the extent that might fairly have been expected. The general custom has been to ship a

crude matte to the United States, entailing great transportation charges and transferring to the latter country branches of the industry that might with more profit be retained at home. In the Slocan district of British Columbia even the silver-lead ores are treated in this partial manner. Owing to the depreciation of silver and the abnormally low price of lead during the past two years some of the mines of the Slocan had to be closed down. Such a contingency might be obviated if the mining companies formed an association for the starting of paint manufactories in the vicinity of the mines, and a Protectionist Government like that of Canada might in such a case grant a bounty upon the manufacture of paint to give a start to an industry that in a district so rich in lead should soon be conducted at a great profit. The matte hitherto smelted at Copper Cliff has contained no more than 30 per cent. of nickel and copper, but about a mile to the south-west of the mines of the Canadian Copper Company refining works have recently been opened by the Orford Copper Company—also embraced in the Trust—for the purpose of converting the crude matte into a matte of 75 per cent. to 80 per cent. of metal. At the date of our visit an average monthly capacity of 2,400 tons had been attained.

Equally important, if not more important, benefits may be expected to accrue to the locality when the works for the production of nickel-steel now being erected by the Consolidated Lake Superior Company at Sault Ste. Marie are in full operation. This company has acquired several nickel mines, among them the Gertrude Mine, which carries

practically no copper, and intends to turn the whole product to account at the Sault. It began by utilising the sulphurous acid, which the Canadian Copper Company has hitherto allowed to go to waste, for the manufacture of calcium sulphite for a chemical pulp mill, and pending the completion of its blast furnaces for the making of ferro-nickel, the nickel matte was being stored in the form of briquettes, large piles of which had accumulated.

Although Ontario has not yet derived that wealth from its nickel mines which might have been expected, still the value of the product has far exceeded that of any other metal obtained in the Province, and no other mines have so rapidly during the past few years increased in productivity. Of the metalliferous output of the Province in 1901, nickel contributed 37 per cent., pig iron 33 per cent., copper 11 per cent., and gold only 5 per cent. The following table shows the growth of the various industries since 1898, and indicates how immense has been the activity of the nickel-mining section during the recent years :—

	1898.	1899.	1900.	1901.
Gold	$275,078	$424,568	$297,861	$244,443
Silver	51,960	65,575	96,367	84,830
Copper	268,080	176,237	319,681	589,080
Nickel	514,220	526,104	756,626	1,859,970
Iron ore ...	48,875	30,951	111,805	174,428
Pig iron ...	530,789	808,157	936,066	1,701,703
Steel	—	—	46,380	347,280
Zinc ore ...	—	24,000	500	15,000
Total... ...	$1,689,002	$2,055,592	$2,565,286	$5,016,734

The great increase in the value of the nickel out-

put is partially accounted for by the rapid advance in the price of the metal, which throughout 1901 stood at 50 cents per pound in New York. The average price at which the nickel contents of 30 per cent. matte were appraised in 1900 was only 10.7 cents per pound, while in 1901 it was 20.9 cents. The value of the refined nickel contained in the matte appraised at the selling price in Ontario at $1,859,970 as above, is computed by the Provincial Mining Department at $4,440,000. To that may be added $1,456,000, the value of the copper content. During the past ten years Ontario has given to the world 26,606 tons of metallic nickel, equal to half the total supply.

Although the Copper Cliff neighbourhood had not for us the fascination of the mining camps of British Columbia, we there spent a day which I would not willingly have omitted from our itinerary. The officials of the mines were mostly Americans, who showed us every courtesy and hospitality, evincing to strangers that extraordinary frankness in showing and telling everything concerning their business which excites so much surprise among Englishmen, accustomed to the secrecy with which in England everything is so jealously guarded.

We took train at Copper Cliff for the Sault by the Minneapolis, St. Paul, and Sault Ste. Marie branch of the Canadian Pacific Railway. Our course took us again westwards, along the shores of Georgian Bay, through a well-wooded country where agriculture has made little headway, but where mining settlements and lumber-mills give evidence of the spread of industry. The distance from Sudbury to Sault Ste. Marie is nearly two hundred miles. The

Sault line skirts the whole of the southern border of Algoma, and is not only the chief means of railway communication between Central Canada and the United States, but one of the main routes of travel between East and West. It was almost dark when from the landward side we entered the Sault, which under a canopy of smoke we had beheld six weeks before from the decks of the steamer when sailing up the lakes on our way to the West.

CHAPTER XXII

INDUSTRIES OF SAULT STE. MARIE *

A DOZEN years ago the traveller crossing Canada from ocean to ocean, who sought to vary the long railway journey of four thousand miles by sailing up the Great Lakes, beheld little to interest him at St. Mary's River, by which the overflow of Lake Superior is poured into Lake Huron, except the Rapids, the Canal on the United States side, and the "teepees" of an Indian Reservation on the Canadian side. While the lake steamer was being towed through the locks he might get ashore and have the pleasurable excitement of risking his life by shooting the Rapids in a canoe. A few degenerate descendants of the Huron Indians still make a living by piloting tourists down the Rapids; but now there are sights on either shore, and especially on the Canadian side, much more interesting than even the mighty river breaking into a foaming torrent half a mile in length.

Cities have arisen on both sides of the Ste. Marie Rapids, the twin cities of Sault Ste. Marie—the

* Reference is made in Chapter IV., which deals with the lake navigation, to the shipping of the Sault Ste. Marie Canals. Our party passed the "Soo" without landing on our westward journey towards Winnipeg.

Canadian "Soo" and the Michigan "Soo." "Soo" is the familiar abbreviation for the full-dress title, a sort of *cognomen affectionis*, especially among Ontarians, who, not without reason, look upon Sault Ste. Marie as the germinal bud of a great national iron industry. Should any English readers chance never to have heard of Sault Ste. Marie, and feel a little nervous and uncertain about the pronunciation, they may be reassured on learning that throughout Ontario, and all along the Lakes, it is near enough and good enough to say "Susan—Mary," the pronunciation of Canadians who are not pedantic.

In the annals of industry few romances surpass the story of the Canadian Sault. A few years ago the falls of the St. Mary's River were looked upon only as an impediment to navigation. In Canada and America alike it was thought to be a misfortune to the entire continent that the waters of Lake Superior were not on the same level with those of Lake Huron. To-day these falls are regarded as a source of power and wealth to both nations. But power, however unlimited, is of little use to man unless an abundant supply of one or other of the great basic raw materials of industry is at hand. Iron is the greatest of all these; and, some eight years ago, it chanced that while a genius was applying his mind to the problem of utilising the water-power, a prospector, down on his luck and wandering among the neighbouring mountains, stumbled upon a find of hæmatite which led to the discovery of the iron mines of Michipicoton. If report can be trusted, neither the man who harnessed the falls nor the man who discovered the

northern continuation of the Vermilion Range of Minnesota had a dollar to bless himself with till fortune brought him to St. Mary.

Some fourteen years ago, on the Canadian shore of the St. Mary, a little community which depended for subsistence upon the transport of logs to the Michigan lumber-mills, conceived the idea of forming a municipality and getting up a Water-power Board. Niagara was being harnessed about this time, and the Sault folks thought they would not be behind. Mayor Plummer and his associates were only five years or so "too previous"; but in these five years they were too enterprising by 260,000 dollars, an uncomfortable indebtedness for an infantile community which had no assets save water rights, an incomplete power station, and its municipal privileges. The Sault went completely to the wall and bankruptcy stared the City Council Water-power Board in the face.

In 1894, when things were looking their blackest, a man from Boston appeared upon the scene. Although Mr. Francis H. Clergue, the "Wizard of Algoma," is still an American citizen, he may be described as the Andrew Carnegie of Canada. Beyond dispute, he is one of the world's greatest captains of industry—an organiser, a financier, and a producer, who within a space of eight years has brought into existence a large manufacturing town, has commenced the construction of a Trans-continental railway, and has undertaken the land settlement of a vast tract in Algoma, extending from Lake Huron to Hudson Bay.

When Mr. Clergue struck Sault Ste. Marie, saw its half-finished power-station, and was impressed

with its capabilities as a manufacturing and distributing centre, he called upon the Mayor of the Soo and had a citizens' meeting convened. On consideration of their handing over their water-power, light, water-supply, street railway, and land franchises, he undertook to assume the town debt of 260,000 dollars. A bargain, mutually advantageous, was struck, and Mr. Clergue set off for Boston to raise the capital needed to carry his schemes into execution.

American Enterprise.

The most significant industrial fact about Canada at the present day is that its dormant manufacturing resources, those which need large capital, are being developed—and being acquired in so far as the distribution of dividends is concerned—by Americans. No object-lesson is more eloquent than the growth within the past four years—for it is only since 1898 that the fruits of Mr. Clergue's foresight have become apparent—of the Canadian Soo. Had Mr. Clergue in 1894 sailed for England to lay his St. Mary's proposition before British capitalists, is it likely that it would have resulted in the Consolidated Lake Superior Company, with its present investments capitalised at £25,000,000? The chances are that Mr. Clergue would have been laughed at as an enthusiast, and Canada scoffed as the *damnosa hereditas*, as a field for investment, of the British Empire.

The Consolidated Lake Superior Company, incorporated under the laws of the State of Connecticut, with its capital of 117,000,000 dollars, was not, of course, the immediate outcome of Mr. Clergue's

enterprise. The industries of the Soo are primarily the creation of his own genius ; but from first to last he has found powerful financial backing in America ; and American shareholders are to-day the chief participators in the profits of his multifarious undertakings. The total of hard cash invested by Americans in the Soo does not probably exceed £5,000,000.

No city in Canada has had so large a relative increase in population as Sault Ste. Marie during the past four years. The population to-day is upwards of 15,000, of whom the great majority are employed at the Clergue works. The iron and engineering works are situated upon a tongue of land projecting into Lake Superior, and the monstre blast-furnaces just approaching completion when we were there, descried through the smoke from the chimneys of the rolling-mills, give to the Canadian Sault the appearance of a Middlesbrough planted, as if by misadventure, in a sunlit Canadian landscape—an expansive panorama of pine-clad uplands, romantic islands, gleaming waters, and foaming cataracts. The near prospect, it is true, is less romantic and more in harmony with the dun smoke-clouds that disfigure the lake shore.

Sault Ste. Marie is the only place where it is possible to obtain an adequate conception of the magnitude of the Lake shipping. There are ship canals on either side of the Rapids, one on the north, built by the Canadian Government, and two on the south, built by the Government of the United States. The traffic is as varied as the products of industry ; but the aggregate tonnage, which greatly exceeds that of the Suez Canal, is chiefly piled up

by the vast weight of the cargoes of Lake iron-ore from Marquette for Pittsburg, and the Western grain crop for Chicago and Buffalo.

Any estimate of the commercial importance of the twin cities of St. Mary would be incomplete if no account were taken of the magnificent International Railway Bridge, which spans the Rapids and brings into communication the railway systems of Ontario and Michigan. The Sault-Pacific line (belonging to the C.P.R.) has become one of the established routes of trans-continental travel, and the Algoma Central and Hudson Bay Railway, which the Consolidated Lake Superior Company is constructing, will be the first railway traversing Canada from south to north and bringing Hudson Bay with its fisheries, said to be of great potential value, into communication with the south.

A glance at the map of North America will show that no city on that continent has a more favourable situation for a distributing point than Sault Ste. Marie. It is placed at the junction of three great inland seas—Lakes Superior, Huron, and Michigan. It is in direct communication with six diverging railway systems branching out into the Eastern States, the Central and Western States, and the whole of Canada. Its advantages as a manufacturing centre rival its transportation facilities. Chief among these are an inexhaustible supply of cheap power and a virgin field of cheap iron. Of hardly less importance is the fact that a group of mutually dependent and mutually auxiliary manufactures have been developed under the auspices of one central organisation, the community of interest existing between the subsidiary companies of the

Consolidated Lake Superior Company making the controlling organisation a most powerful one. At Sault Ste. Marie we have all the principles of the American industrial world in microcosm.

When, in 1894, Mr. Clergue and his associates of Philadelphia and Boston purchased from the town of Sault Ste. Marie its incomplete water-power plant, it was their intention to complete the undertaking and sell the power. No great demand for the power, however, seemed forthcoming. To ordinary men the result would have been failure. It only served to nerve Mr. Clergue to greater efforts and inspire him with more daring schemes. He decided to create manufacturing industries for himself. At this time the saw-mills of Ontario were languishing, while vast quantities of Canadian logs were transported to the American side of the lakes, where the lumber mills were driving a flourishing trade. All rights to cut timber are sold subject to an annual renewal of the license, and a few other regulations respecting dues and other restrictions which the Lieutenant-Governor in Council or the Legislature may from time to time enact. Americans had bought up enormous timber limits in Ontario, and had closed the saw-mills on the Canadian side of the Great Lakes and Georgian Bay, transporting the logs to lumber mills on the American side. Ontarians naturally looked upon this transference of the industry with indignation and dismay. The matter became the political question of the hour, and the late Sir Oliver Mowat, the leader of the Liberal Government in the Legislative Assembly, embraced a policy which was ultimately carried into execution. The Provincial Government, under

an order-in-council signed by the Lieutenant-Governor, enacted an additional clause to the general regulations, whereby in the renewal license a regulation was inserted that timber cut on Government domain had to be manufactured into lumber within the borders of Canada. This was even more effective than if an export duty had been placed on logs by the Federal authorities, and it made it absolutely necessary for the American lumbermen to shut their Michigan mills and transport their plant to the Canadian shores. Under the new regulation the Canadian mills immediately resumed active operations.

Mr. Clergue seized upon the opportunity to erect a mechanical pulp-mill, for which raw material was supplied in abundance from the spruce forests skirting the Lake Superior shores. Chemical pulp, owing to its longer fibre, commands a higher price—£6 to £8 per ton, as compared with £4 10s. for ground pulp—and Mr. Clergue, desirous of utilising to the utmost the resources of the Algoma forests, sought the materials for its manufacture. Sulphurous acid, the indispensable chemical, was being wasted in large quantities daily at the roast ore heaps of the Canadian Copper Company at Sudbury, but being unable to make an arrangement for the use of this company's waste product, Mr. Clergue bought a nickel mine for himself.

This provided sulphurous acid for a sulphite pulp mill; but it also provided a residue of nickel, copper, and iron, and these could not be wasted. After long experimentation a plant was devised for utilising the iron and nickel in the form of ferro-nickel. But this product was relatively too rich in nickel, and so

an iron mine was sought in order that by mixing the proper proportions of the two metals a merchantable alloy might be produced.

Genesis of the Iron Industry.

At this juncture the greatest stroke of luck for Mr. Clergue, and the most important of recent Canadian discoveries was made. While he was instituting the work of exploration for iron, hæmatite was discovered in the Michipicoton Mountains. Further research resulted in the discovery not only of a rich mine, but of a whole iron range. A district, one hundred miles square, has now been found to abound in iron ore deposits. Hardly a week passes but finds of red hæmatite, brown hæmatite, or limonite are reported, and quite a large number of big mines have been investigated. The Michipicoton mines have given a fresh stimulus to the iron-smelting industry of Old Ontario, large shipments having been made last summer to the blast-furnaces of Midland and Hamilton, the chief centres of the older iron and engineering industries of Canada. Even Cleveland, Ohio, has purchased ore from the Michipicoton mines.

The character and chemical composition of the ore and the accompanying geological structure of the district admit of hardly a doubt that the Michipicoton Range is the northern continuation in Canada of the famous Vermilion Range of Minnesota, which has yielded the Lake Superior ore to the Pittsburg iron and steel works. The ore occurs in mass around the rim of Boyer Lake,

and when originally found was only covered with a sparse coating of moss. The mining is simply carried on as an open quarry, with appliances similar to those used on the American side at the Messaba and Marquette mines.

So far only one mine has been developed, the Helen; but the company has conducted testing operations on quite a numerous group—the Josephine, the Frances, the Emily, the Grace, &c.—with invariably satisfactory results; and so encouraging are the indications all over the region, which can only be penetrated at present by the old Indian method, that during 1901 Mr. Clergue spent £50,000 upon the equipment of exploration parties alone. The United States Lake Superior companies are spending money in exploring other parts of Algoma. They maintain a good deal of reticence regarding the results, but are known to have acquired licences for some properties from the Provincial Government of Ontario.

To return to the Sault. Determined to utilise all his materials, Mr. Clergue, on the discovery of the Michipicoton iron, set about the building of blast furnaces and the construction of steel plant for the production of rails and structural steel. We saw the rail mill in operation. A capacity of 600 tons a day had been reached, and it was expected that four blast furnaces, each with a capacity of 1,200 tons of pig per diem, would be blown in by the end of the year. Two of the furnaces are adapted for coke and two for charcoal; and thus a large charcoal plant has naturally followed to utilise the hardwoods of Algoma.

One industry led to another. Alkali is necessary in the manufacture of sulphite pulp; therefore the Electro-Chemical Company came into existence. Its raw material is salt from Huron County, and its products caustic soda and bleaching powder. To transport iron and nickel ore from the mines, limestone from the quarries, and pulp-wood from the forests, railways and steamboats became necessary, and consequently the organisation of the Algoma Central and Hudson Bay Railway was brought about. The railway enterprise led to the erection of car-works, and it would be tedious to enumerate the various machine shops, foundries, and other subsidiary engineering establishments called into existence as the necessity arose. Among the latest and most interesting—undertaken to utilise all the by-products—are calcium carbide and methyl alcohol works, and—adjoining the lumber works—a furniture factory and veneering works.

All this in a space of less than eight years!

Michipicoton is situated one hundred miles from Sault Ste. Marie, along the northern shore of Lake Superior. Quite a town is springing up here likewise; but I spare my readers a description of the mining plant—the steam shovels, derricks, skips, cableways, wharves, docks, and ore fleet—enough has been said to show what Americans and Canadians are accomplishing at the Sault, and why it is that the Sault is regarded as the future Pennsylvania of Canada.

Needless to explain, all the plant—pulp-making and engineering machinery—is of American manufacture and design, except that part of it which has been produced upon the spot. Most of the labour

is highly skilled, and in every department I had ocular demonstrations of the American principle—maximum of production with the minimum of hand labour. Mr. Clergue, desirous of being a good Canadian, has made repeated efforts to induce British workmen to come to the Sault, but with poor success. The majority of the skilled workmen are foreigners—Germans, Swedes, and Danes—and the unskilled labourers, Finns. All the workers are comfortably housed in the prevailing Canadian fashion which I have already described—wooden frame houses with gardens.

When Mr. Clergue obtained the concession to construct the Algoma Central and Hudson Bay Railway, he obtained land grants on the usual scale and a subsidy from the Dominion Government. He has established emigration agencies in Europe, and expects to settle one thousand agricultural immigrants every year. Last summer a start was made with two hundred Scandinavians, all of whom got quarter-sections—160 acres free—of good farm land. The following line of policy has been adopted—to expend five dollars on manufacturing and mining enterprises for every one dollar spent on railway construction, so that the creation of traffic may keep pace with the laying of railway track.

I have throughout spoken of Mr. Clergue, when in strict formal phrase I should have said the Officers of the Consolidated Lake Superior Company; but Mr. Clergue is the presiding genius, the great magician to whom the good citizens of the Sault and a grateful Canada attribute everything. His initials, "F. H. C.," have suggested the sobriquet of "Faith, Hope, and Charity."

The Michipicoton Iron Mines are the best as yet discovered in Canada; and as the Dominion Government pays a bonus upon every ton of pig-iron manufactured within the country, the industry will be developed locally. As the great nickel tract is only some fifty miles to the north, the Canadian Sault will also become the chief seat of the manufacture of ferro-nickel steel, extensive plant for producing which is already laid down. There is, therefore, every encouragement to build a fine town; and the start which has already been made is truly wonderful. From an architectural point of view, the Clergue works are the finest in Canada. They are built of hard red sandstone—of the Huronian series—which was cheaply obtained, as vast heaps of it had been blasted in excavating the power and the ship canals. As this splendid building stone is being employed for the public buildings of the town, the streets of Sault Ste. Marie have a grand and substantial appearance, quite exceptional in most towns of its size, either in Europe or America.

Note.—On the eve of publication intelligence reached England that the Consolidated Lake Superior Company had been compelled to suspend operations. This blow to Canadian industry has been brought about by the failure of Mr. Clergue, owing to the unprecedented stringency of money in America during the past twelvemonths, to obtain the capital necessary to prosecute the development of some of his uncompleted undertakings. The preceding chapter must, therefore, be read as a record of past achievement. There is no reason to suppose that the process of reconstruction will be long deferred, or that the check will be other than temporary, but the partial stoppage of the Sault industries even for a time cannot be regarded as other than a deplorable misfortune to the Dominion steel trade.

CHAPTER XXIII

CANADA'S HOUR OF DESTINY

ON the morning of Friday, September 19th, I reached Ottawa alone. At North Bay junction, on the evening of the 18th, I took leave of my friends to catch the Allan Liner *Numidian*, sailing from Montreal on the morning of Saturday, September 20th, while they turned southwards for Toronto and the Falls of Niagara to have a few days' rest and relaxation before embarking on the homeward ocean trip. The main object of our mission had been accomplished. We had traversed the Canadian West in harvest time, and visited the great province of British Columbia, the land of promise on the Pacific shore. Without taking into account our innumerable side journeys, we had performed upwards of 7,000 miles of railway and steamboat travel, enjoying such opportunities of witnessing the resources of these Western provinces as, we were assured, no visitors from England had ever enjoyed before. That nothing which could conduce to our instruction was left undone by private individuals and public bodies must have been rendered apparent in the preceding narrative, although in order to keep my story within reasonable compass I have been compelled to omit

mention of no end of minor occurrences which, though edifying to ourselves, would have seemed trivial if fully narrated here.

To the reader it may seem presumptuous that any one should think himself competent to express opinions upon Canadian topics after a visit so brief, consumed in great part in hurried travel. If, after scouring through Europe in the same way, a man were to utter pronouncements upon social and industrial problems, he would certainly be guilty of presumption, and would assuredly give expression to many erroneous opinions. Amid social conditions as complex as those which obtain in any European country, a man may spend a lifetime and still lack the information requisite to form sound opinions upon matters of gravest moment. In a country like Western Canada no such complexity exists. There we have not the legacy of centuries of effort, and institutions embodying the resultant of ages of conflict between selfishness and the moral instinct. The social institutions are simple, and represent the fruits of the ripest wisdom and moral perception of both the Old World and the New. The categories of industry are as few as the social divisions, and, in a word, in Canada's vast domain the visitor is confronted not with the study of man in a peculiar social, but in a peculiar physical environment. Canada presents for contemplation not the finished structure, but the physical basis of an empire. The feelings of a traveller in most parts of Canada are those of an explorer. No part of the Dominion, not even the fertile Niagara Peninsula, presents the aspect of a populous country. Undisturbed by the distractions of an old civiliza-

tion, of historic cities and picturesque customs, the traveller has ample leisure to study the physical features of a noble continent; and unlike the traveller in the East, who, saddened by the contemplation of ruin and the contrast between vanished splendour and present decay, is ever looking backwards, the traveller in Canada, everywhere stirred to enthusiasm by the spotless charms of a virgin land, is ever looking forward, conjuring up visions of busy cities, of richly cultivated plains, of industry and commerce commensurate with the country's capabilities. The vision is all the more entrancing by reason of the propensity of the mind to associate coming populousness and power with a loftier range of humanitarianism. The mind refuses to believe that the social injustice of the Old World will be transferred to the New, and the illusion is strengthened by observation of the free and natural life which the present handful of colonists lead.

Capacity for Population.

No human being could at the present time, with any pretence to credibility, undertake to declare what are the limits of cultivation and population of Canada, nor the time within which these are likely to be reached. In a preceding chapter we gave an estimate of the agricultural capabilities of Manitoba and the Territories drawn up by the Deputy Minister of Agriculture of Manitoba. Such estimates are, of course, hypothetical and can only be verified by experience. But that men of acknowledged capacity, practically

acquainted with the country and the conditions of farming, should form such magnificent views is at least eloquent refutation of the prejudice formerly entertained that Canada would never be capable of supporting aught but a meagre population. Strangely enough, this churlish opinion, discredited by the events of recent years, was expressed by Dr. Andrew Carnegie in his Rectorial Address to the St. Andrew's students. Canada will certainly never become a populous country in the sense in which we should apply the term to countries like England, Holland, or Belgium. As compared with these countries the United States at the present day, with its population of seventy-six millions, is sparsely inhabited, and the United States, taken as a whole, may remain so permanently. But the Rainless Belt of the United States is nothing like so extensive as the "Barren Lands" of Canada. Nothing but the pressure of population could compel human beings to fix their abodes amid the Arctic solitudes of the Mackenzie River, and to try to extract a precarious subsistence from the icy tracts of Labrador and Keewatin. Even if these lone and inhospitable regions which make up so much of the land surface of the Dominion be left out of account, and we confine our survey to the territories lying to the south of the 55th or 56th parallel, we find wide areas of rugged country occupied by stony mountains and storm-swept tablelands which will assuredly remain tenantless until in the fertile valleys and upon the verdant prairies every rood of land maintains its man. If Canada should every become as populous as Europe, districts which as yet are imperfectly

explored, like the northern parts of Algoma and Thunder Bay in the heart of the Continent, and the great interior of British Columbia, would certainly shelter a race of hardy peasants and mountaineers, such as from immemorial time have lived in every mountainous region of Eurasia from the Sierras of Spain to the Tablelands of Armenia and Turkestan. If we exclude Labrador and Keewatin, probably the wildest parts of Canada south of the 55th parallel are better suited for human habitation than Norway and Sweden and the Highlands of Scotland, and no one with any knowledge of the hill-folk of Europe would presume to say where the limit of settlement in Canada could be drawn.

But the time is far distant when the question of the suitability of the Canadian Highlands for human habitation will be of the slightest practical moment. Canadians may congratulate themselves that their country is capable of sustaining untold millions, while vast regions remain in a state of natural grandeur and desolation. There are spacious regions of extent sufficient for kingdoms which man may possess and inhabit before concerning himself with the possibilities of straths at present inaccessible. The construction of the Canadian Pacific Railway has rendered accessible in Western Canada a fertile territory exceeding half a million square miles in extent, and the settlement of this region alone will make Canada one of the richest and most powerful empires in the world. Judged by American conceptions of capacity for population —which are widely different from those of the Old World—the capabilities of Canada exceed those

of the United States by the whole of the vast area comprised in the provinces of Manitoba, Assiniboia, Alberta, and Saskatchewan. The prairie lands of the United States suitable for settlement are rapidly approaching exhaustion. The Canadian prairie, more extensive than that of the Republic, is all but virgin. Only those who know how important a factor in the economic history of the United States the cultivation of Minnesota, North Dakota, Montana, and other wheat-producing States has been, can realise what the opening up of similar territories will effect for Canada. Marvellous during the past quarter of a century as the development of the manufacturing industries of the United States has been, that development has been less important than, and would have been impossible without, the concurrent extension of the farming industry in the West. The export products which made wealth and population flow into the country from abroad, and created that ever-expanding home market whence the manufacturers drew their profits, came from the harvests of the West. It is not American steel and machinery and cloth that have caused the industrial fabric of Europe to rock, but American wheat and flour and meat products. As without the enormous and ever-increasing exports of foodstuffs, none of the manufacturing industries of the United States could during the last half-century have developed as they have done, it follows that the fundamental cause of the great increase of population and wealth has been the cultivation of the prairie States.

Physical Bases of Empire.

Now the turn of Canada has come. Are the conditions of success extant in her case as in that of the United States? Even to raise the question would produce a smile in Canada. Not only do Canadians consider their country richer than the United States, but they believe that it is better laid out for the purpose of turning its superior riches to account. I will not discuss their rival merits, but shall content myself with pointing out that in both respects—natural richness and adaptability for development—Canada has been liberally endowed by Nature. The whole of this volume has been concerned with demonstrating the agricultural and mineral wealth of the Dominion, but some features which did not come under my own personal observation remain to be noted. In building up the American Empire the chief auxiliaries to the fertile farm land have been the vast deposits of coal and iron, the great lakes, and the navigable rivers. Has Canada coal and iron to form the bases of great national industries? Upon the authority of Dr. Robert Bell, the Director-General of the Dominion Geological Survey, "Canada possesses coal enough to supply the world." Like her prairie lands, her great coal measures are virgin fields. The coal-field which we visited in Vancouver Island is but a detached outlier, upheaved amid a mass of volcanic monuments. The untapped field, horizontally interbedded among undisturbed sedimentary strata, is spread over Saskatchewan and Athabasca, and is of unascertained depth and lateral extension. From the Crow's Nest Pass to the Yukon detached masses

have been found throughout Alberta and British Columbia. Exposed along the banks of various rivers in Saskatchewan are level seams of coal like those on the Ohio, Alleghany, and Monongahela in the United States. This coal-field may be as extensive as—probably it even exceeds—the Appalacian coal-field, and it is equally important to note that while the United States possesses no coal on the shores of either ocean, Canada has rich mines capable of great development at tide-water in Nova Scotia on the Atlantic and on Vancouver Island on the Pacific. In connection with coal it should also be noted that natural gas and mineral oil may, as in the case of the United States, prove important factors in nursing Canadian industry. We have nothing better than negative evidence from which to infer that Canada has not as copious stores of these natural sources of energy as the United States. At Medicine Hat in Assiniboia a natural-gas field has been discovered and harnessed. At this point on our homeward journey we made a halt of a few hours' duration to inspect the plant and witness an exhibition of the enormous pressures obtainable. In Southern British Columbia we heard a good deal about petroleum indications in the Crow's Nest Pass, and since our return home there has been quite a rush to a mineral oil field proclaimed in Ontario.

Canada seems to be no more bountifully supplied with coal than with iron. All along the route from Quebec to Vancouver I met gentlemen who poured into my ears almost incredible accounts of deposits of iron ore awaiting the advent of capital and the mining engineer. I was told of rivers in Labrador

which flow over beds of ferruginous sand, and at Victoria I heard of mountains of magnetite on the shores of the Straits of Georgia. At Winnipeg I met an enthusiast who believed that the "Black Country" of Canada would eventually be found in Manitoba. That iron ores abound in all these places is as likely as not, and if the geology of Canada was as minutely investigated as that of England has been, it might be found that for every cubic foot of iron ore which England ever possessed, Canada possesses untold thousands. Hitherto the search has been mostly for gold, silver, copper, and nickel; but abundant as the finds of these have been, their value is doubtless small compared to what the wealth of iron will be found to be when the time is ripe for turning it to account. A few years of exploration have brought to light enormous deposits of hæmatite in the Michipocoton Range in Algoma. The Helen Mine in this district (belonging to the Consolidated Lake Superior Company) can, like the Messaba and Marquette Mines, be worked as an open quarry. A geological map issued by the Ontario Bureau of Mines shows a dozen similar mines yet untouched in the Michipocoton Range. I am indebted to Mr. W. G. Miller, of the Geological Survey, for a map of the Temagami Forest Reserve in Nipissing, showing iron deposits probably as extensive and rich as those of Michipocoton. Another chart shows iron ore deposits in Thunder Bay in a district called Atikokan. All these deposits have been found in that immense land of lakes and mountains known as New Ontario which lies to the north of Lakes Huron and Superior, and these discoveries point to

the lake basin as the seat of large engineering industries, which (as explained in the preceding chapter) have already made a magnificent start at Sault Ste. Marie.

These, however, by no means exhaust the list of iron-producing localities. In British Columbia rich ores of iron have been found in Texada Island in the Straits of Georgia and in the Crow's Nest Pass. East of Hudson's Bay there are said to be deposits of iron and manganese ores rich enough to entice humanity to its lone shores, and iron ore is said to be of frequent occurrence all down the valley of the Ottawa River. Lastly, there are the hæmatite mines of Newfoundland and Nova Scotia which have been made the basis of the important enterprise of the Dominion Iron and Steel Company, by which within the past few years Halifax has been transformed into the Middlesbrough of the Atlantic Coast. Therefore, in so far as coal and iron are concerned, Canada possesses the raw materials wherewith to follow in the footsteps of the United States as a manufacturing country.

In the matter of water transport her advantages even excel those of the United States. With the latter Canada shares the Great Lakes, and enjoys a monopoly of the tidal highway of the St. Lawrence. We have already shown that by the construction of a canal to bring into connection the navigable stretches of French River, Lake Nipissing, and the Ottawa River, Canada could become mistress of a waterway right through, and almost as straight as a bird flies, from the grain-growing West to the Atlantic seaboard, saving a thousand miles of transportation over the routes followed by the grain

shipments of the United States. Canada, therefore, not only has it in her power to produce more wheat than any other country in the world, but to transport it to the ocean by a quicker and cheaper route than any possessed by her greatest competitor. This power she holds and doubtless will exercise. The energy of her lusty children is equal to the accomplishment of the achievement.

To these advantages must be added the greatest potentialities for producing power, in the shape of her innumerable waterfalls, of any country in the world. Canada is said to control half the fresh water on the globe. From the stupendous power of Niagara to the cascades available for supplying light and electricity to almost every town, her resources in this respect, so important in modern industry, are simply beyond computation. Plants have already been erected, as at Shawinigan Falls, in the Province of Quebec, capable of producing energy in quantities hitherto undreamed of. That the Americans are conscious of the superior resources of the northern state in this respect is shown by their anxiety to acquire waterfalls wherever possible in Canada. Water-power will play its part in the development of every industry, but among the first in which its efficacy will be proved—or rather has been proved—are the manufacture of wood-pulp for paper making and the manufacture of a large group of chemicals. To enumerate all the so-called non-metallic minerals of which Canada—a geological cosmos—possesses inexhaustible supplies would be to run through all the natural compounds of calcium, sodium, and the other alkali metals and metals of the alkaline earths. As regards the organic elements of chemical in-

dustry, it is only needful to repeat that the forest area extends from Newfoundland and Labrador westwards to Alaska in an immense belt lying to the north of the St. Lawrence valley and the prairie provinces almost up to the Arctic Circle. This pulp area, estimated to comprise four hundred and fifty millions of acres, will suffice to provide the world with paper material for ages to come. How immeasurable this fount of wealth really is only those can fathom who have ever tried to comprehend the extent to which paper enters into manufactures of every description. That Canada will never get beyond the stage of supplying to the world the raw material—ground pulp and chemical pulp—only those will fancy who have failed to note the advance made in manufacturing in recent years.

The growth of the foreign trade of Canada is but a faint index of manufacturing progress, for the reason that her manufacturing energy is almost exclusively expended upon the home market. That progress is apparent to the stranger the moment he approaches the port of Montreal. He is surprised to find himself in a great industrial city, with mills and warehouses rivalling those of Glasgow or Manchester. The same experience is repeated at Toronto. But as in Canada the industrial arts, fostered by a fiscal policy of high protective tariffs, will follow in the wake of agricultural development, some measure of the progress achieved, and a sure criterion of what may be predicted, are to be found in the record of foreign commerce of the past few years. This record shows that the aggregate foreign trade of 1902, as compared with that

of 1895, had increased to the enormous proportion of 91 per cent., while the total trade showed a gain of above $70 per capita, a far greater proportionate gain than that of the United States, even in the years of her greatest prosperity. To duly appreciate the significance of this movement it must clearly be understood that Canadian trade is not bound up with and dependent upon that of the United States. Thanks to the selfish policy of the latter country in repealing the Reciprocity Treaty in 1867, Canada has now for thirty-five years been flung upon her own resources, with the result that she has become a self-reliant and commercially independent nation. The great prosperity, now attracting universal attention, has sprung from the development of her own resources. Concurrently with that development, and partly as the result of the punitive attitude adopted by the United States, has been the growth of Canadian national life and Canadian patriotic sentiment. In feeling, as in industry and government, Canada has become one of the nations of mankind.

Notwithstanding the anathema pronounced by the most illustrious of my countrymen against all those whose hearts do not burn within them when steering their barque homewards from wandering in a foreign strand, I must confess to feeling a sickness at heart when bidding adieu to the blue skies and gleaming waters of Canada for the "motty misty clime" of the British Islands. No hurrying crowds throng the streets of Canada's federal capital. Compared with Montreal, Toronto, Winnipeg, and

Vancouver, Ottawa is a city of drowsy dignity and peaceful repose. The population is about sixty thousand, and had increased during the census decade 1891–1901 by about sixteen thousand. As the Citadel upon the Heights of Quebec is the visible emblem of Canada's historic past, the Houses of Parliament at Ottawa, seated upon a lofty half-moon platform of rock, around the base of which the noble Ottawa River rolls in wide-sweeping curves, stand to-day the outward symbol of Canadian nationalism, unity, liberty, and sovereignty. In dimensions and design the legislative halls worthily represent the ample limits of Canada's far-extended sway, while the site and surroundings are equally typical of the inexhaustible beauties of the land of crag and cascade, forest and flood. When Parliament is in session the scene may be one of much animation; during the recess the gardens and promenades are still and sequestered, and during the sleepy hours of noonday one may share with the birds the sunshine and the shade, the fragrance of the flowers, and the cool breezes from the distant woods. Green forest and blue mountain bound the horizon on every side. The prominent features of the nearer landscape are the foaming cataracts of the Ottawa River, the cathedrals and convents of the French city, and the distant river terraces, where the suburban homes are lost to view amid thickly embowering green. The true tint at this season, for it was now the close of September, was the dark pine-green, spotted and mingled with the golden flush of the autumn livery of the deciduous trees, and that wonderful brilliant crimson of the Canadian maple and sycamore.

PARLIAMENT BUILDING AT OTTAWA.

At the chosen centre of Canadian national life, in quiet contemplation of a scene so charming and so characteristic, I whiled away the morning hours of my last day on Canadian soil. Ardently as I hope that Canada will rapidly increase in wealth and population, I hope more fervently still that the calm and the beauty of that noble valley will never be banished by the roar, and the fever, and the fret of that industry which is now spreading along the highways of Dominion traffic. In the space of ten days I was again to behold the desolation of industrial England, the bleached or blackened fields which stretch from Lancashire into Yorkshire, the unsightly mockery of manufacturing greatness where opulence has failed to beautify and ennoble the lives of the masses. I contrasted the darkness, moral and physical, that have followed in the train of industrial development in England, with the Arcadian freshness of the Canadian landscape. I had become convinced that great multitudes of British people will migrate to find brighter homes in Canada and to help in furthering industry and commerce. For Canada, now so beautiful and attractive, I had conceived an engrossing love: could I, while yearning to transplant the whole of the crushed population of the United Kingdom to a wider sphere and brighter sky, divest myself of the hope that in the New World civilization will realise loftier humanitarian aims, and that industry, developed upon principles which admit of a more equitable division of its products, will never deface so fair a land—one of the most beautiful in which the Aryan Family in all their long migrations have ever found a home?

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